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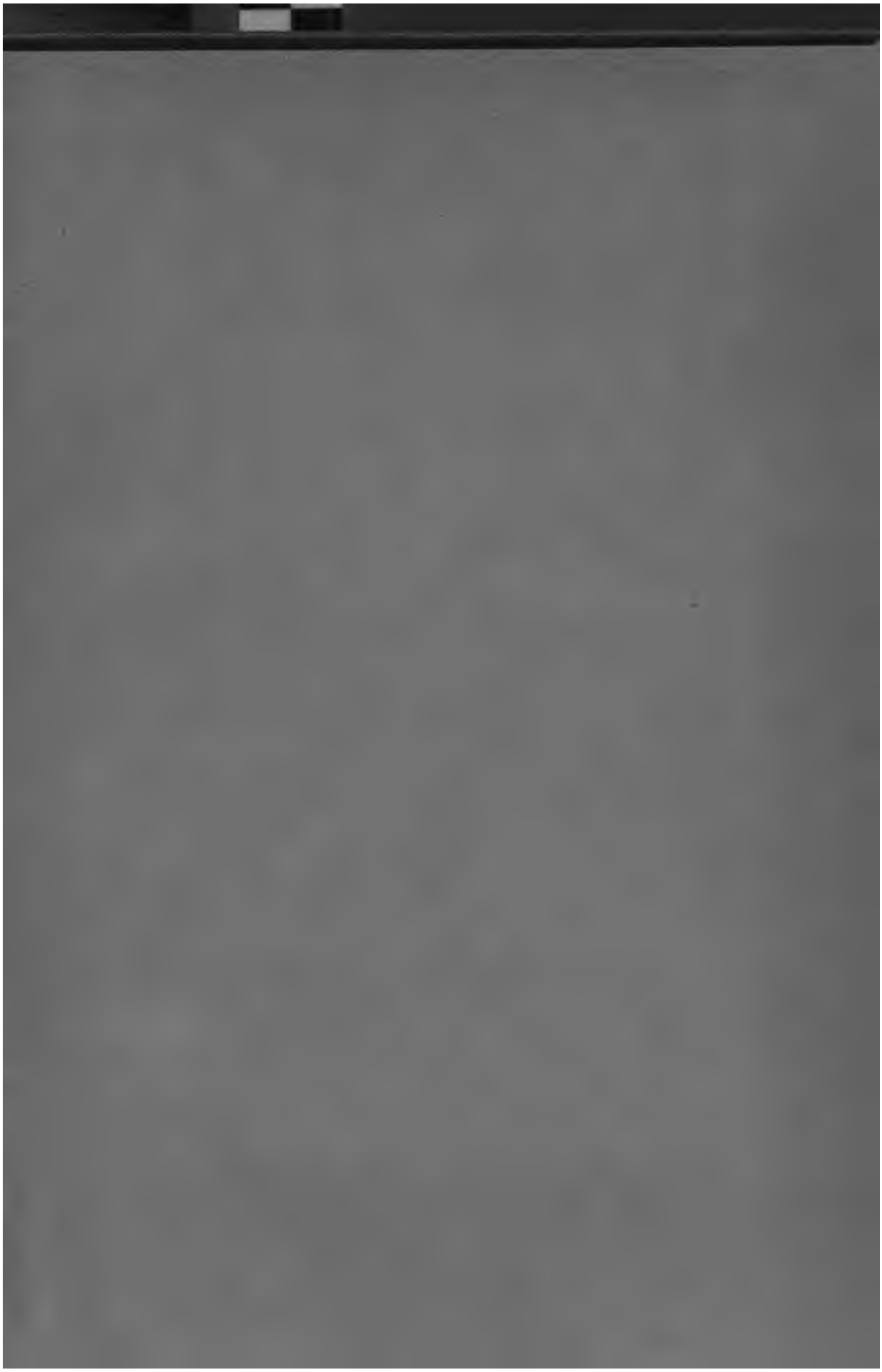

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No. 5. The extract promised in the footnote is unavoidably held over to 1903.

No. 74, page 100, for *audiri* read *audiri.*

No. 78, line 26, for *as* read *on.*

No. 93, for *Hewittt* read *Hewitt.*

No. 124. The last two paragraphs should be interchanged.

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FROM MASSET VILLAGE, QUEEN CHARLOTTE ISLAND, BRITISH COLUMBIA.

(PITT RIVERS MUSEUM.)

MAN

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ORIGINAL ARTICLES.

Totemism. With Plate A. Tylor.

Note on the Haida Totem-Post lately erected in the Pitt Rivers Museum at Oxford. *By E. B. Tylor, D.C.L., F.R.S., Professor of Anthropology in the University of Oxford.* 1

At the wish of the Editor of MAN I write a few lines to accompany the coloured plate of the totem-post from the Haida village of Masset. This is to anticipate a fuller account to be offered to the Anthropological Institute when the evidence respecting the monument comes into a more complete state. The post stood till last

TOTEM-POSTS AS THEY STOOD AT MASSET VILLAGE, QUEEN CHARLOTTE ISLAND, BRITISH COLUMBIA.

A. *The post now at Fox Warren, Somerset.* B. *The post now in the Pitt Rivers Museum.*

year in the remarkable row of such posts in front of the chiefs' houses. It is carved from the trunk of the great British Columbian tree, hollowed at the back to be more readily raised into its place when finished. A pit was dug somewhat after the manner of ancient Egypt to receive the lower 8 or 10 feet when the huge post was raised into position. Its present height, after its being sawn across near the ground and set on a base in the Pitt Rivers Museum, is a little over 40 feet, not far from the original height.

THE TOTEM-POST AS IT STANDS IN THE PITT RIVERS MUSEUM, OXFORD (*front view*).

The totems represented belong to those with which the family was connected. The bear appears repeatedly, with the raven, frog, crayfish, and allusively the killer whale, whose fins are inserted, with native incongruity, on the raven's wings. Above all sit the three chiefs wearing the tall chiefs' hats (*tadn skillik*). It happened, fortunately, that the two house-posts between which the totem-post now stands (*Journ. Anthr. Inst.*, Vol. XXVIII., pl. xiii.) came from the same village, perhaps from the same house. Thus the story of Hoorts the Bear hugging to death Towats the Hunter appears twice, a good example of Haida totemism, in which the totem-animal represents, not a forefather (for the Haidas say a bear is always re-born a bear) but a mythic creature who figures in the traditions of the family. Whether any myth is attached to the bear eating one frog and following another, Mr. Balfour and I have done our best to discover, as yet without avail. But there may still be Indians on Queen Charlotte Island who know.

No more posts are likely to be set up at Masset. Missionary influence has impressed on the native mind a sense of such art being a waste of labour. The Haidas will, perhaps, remember their old ideas for a generation, and it is to be hoped that more will be collected. It seems, however, that the last time is come for getting together the information available there and elsewhere as to the institution of totemism, which I venture to class among the most important in the lower stages of human society. It is a pity that the word *totem* came over to Europe from the Ojibwas through an English interpreter who was so ignorant as to confuse it with the Indian hunter's patron genius, his *manitu* or "medicine." The one is no more like the other than a coat of arms is like a saint's picture. Those who knew the Algonquin tribes better made it clear that totems were the animal signs, or as it were crests, distinguishing exogamous clans; that is, clans bound to marry out of, not into, their own clan. But the original sin, of the mistake of Long the interpreter, has held on ever since, bringing the intelligible institution of the totem-clan into such confusion, that it has become possible to write

about "sex totems" and "individual totems," each of which terms is a self-contradiction. It is to be hoped that in the full examination of totemism, which seems likely to take place before long, it may be borne in mind, first and foremost, that totems are the signs of intermarrying clans. E. B. TYLOR.

India. Rose.

Head-shaping in the Punjab. *By H. A. Rose, Census Superintendent.* 2

The following notes on the question of head-shaping may be of interest. I see that the author of the excellent article on "Survivals among the Kappadokian Kizilhash" (*Journ. Anthr. Inst.*, Vol. XXX., p. 323) appears to doubt whether the broad high skull, *straight from behind*, is artificial or not. The following note by Captain A. C. Elliott, Deputy Commissioner of Gujrat, seems to show that it is due to swathing in infancy :—

"I have ascertained the following facts as to Pathans of the Derajat. In that part of the country a flat back to the head is considered a beauty. The mother for the first few months ties the infant in a cloth, the hands being placed on the chest or stomach, with a fold of the cloth passing over each arm.

"The mother places the cloth on her legs lengthways, not across them, and the infant is placed on the cloth. One end is passed over the right arm and under the left thigh, and the other end passes over the left arm and under the right thigh. The ends are brought over the knees and legs, and then tied.

"A pad, consisting of several layers of cloth, is placed on the ground on which the child sleeps, his back being laid on this, the head hanging down and the back of it resting on the hard floor.

"The child is bathed every day and the head rubbed with oil, the back of the head being gently pressed and flattened. At the same time the nose is pressed and pulled gently with the fingers to make it long.

"A long nose and a flat back to the head are considered essential points for every handsome man or woman in those parts! The treatment shown above keeps the child from moving about, and the soft infantile head gets perfectly flat in time."

In Jhang, in the centre of the Punjab, the same account is given with the addition that both Hindus and Mohammedans consider "a long nose and a flat back to the head" essential to beauty. To secure the latter the child is made to lie with its head in a round earthern vessel lined with soft material but with a hard flat tablet against the back of its head.

Elsewhere the object seems to be to secure a broad forehead :—

"There is one peculiar custom, which I am told is almost universal, of moulding the heads of new-born children by means of an earthenware cup, so as to produce a broad open forehead. This custom prevails, I believe, in Afghánistán and Multán, but is certainly unknown in the Punjab proper. The Civil Surgeon assures me it is very efficacious and does not appear to injure the brain, though it certainly does produce the round bullet head associated in European minds with a meagre intellectual development." —*Gazetteer of the Mozaffargarh District*, p. 53.

To this Pandit Hari Kishen Kaul, M.A., adds : "It is considered the first duty of "a mother to shape the head of her child. In addition to pressing the forehead with "an earthen cup, the mother keeps pressing it with the palm of her hand whenever she "is suckling the baby. If the head is not shaped well in this manner, the child is "called *Mula*, *Dhasira* (having 2½ heads), or a *Satsira* (having 7 heads). It is "considered a mark of beauty that there should be a pit in the chin. This is made "artificially by frequently pressing the centre of the chin of a baby with one end of a "*Suramchu*. An eagle nose is considered very beautiful, and the nose of the infant is "accordingly pulled and moulded.

"The mother is also expected to shape the limbs and body of the infant. This is done "by a process called *Bandhna Baddhan*. A sheet of cloth is wrapped round the infant "so that his arms should be stretched alongside of his body and his legs straight. A strip "of cloth is then tied round the extremities, somewhat like the figure 8 with a knot in the "middle. The head is kept out. This practice is supposed to keep the body in shape."

Further, in Rohtak (in the S.E. of the Punjab) the custom is thus described: "There is no practice analogous to that which the Pathans of Derajat have, of pressing "the head of a child to give it a certain shape and add to its beauty, in this district. "The only custom prevailing in this district somewhat akin to it is, that fine wheaten "flour kneaded in *ghi* and water is rubbed on the forehead in certain lines in order to "uproot hair and give specified angles to it. It is continued for about forty days, as "by that time no hair remains on that part of the forehead which is wanted to be "cleared and there is no danger of its growing again. Some apply collyrium on the "eyebrows to give them a black colour."

The enquiries made are incomplete, but it is clear that a flat back to the head may be artificially produced.

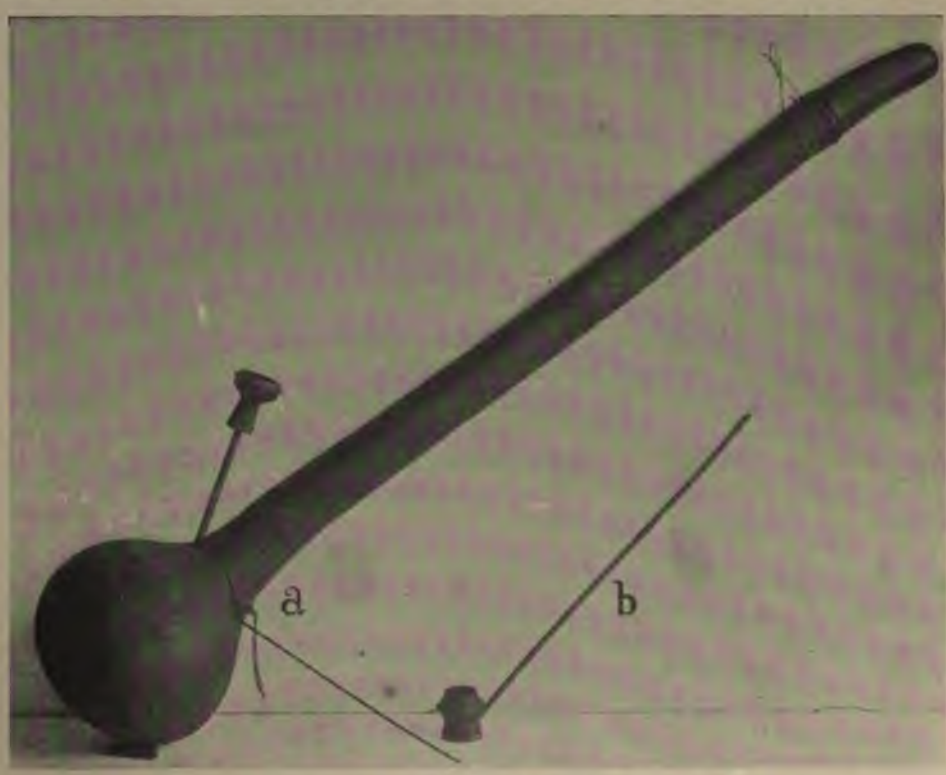
H. A. ROSE.

Burma. Quick.

Native Smoking Pipes from Burma. *By R. Quick, Curator of the Horniman Museum.* 3

The pipes figured in the accompanying illustrations were collected a few years ago in Burma.

I. The gourd pipe (*a*) in the first illustration is of very unusual size; 2 ft. 9 ins. in length. Through a hole in the side is fixed a small hollow reed carrying an earthenware bowl. The mouth end of the gourd is bound with brass wire in order to strengthen it,



(a) CHIMMÉ SMOKING PIPE. (b) QUAYMU SMOKING PIPE.

and attached to the neck of the gourd is a trimmer (used for cleaning the stem), which is, in fact, a rib of an English umbrella. Lieut.-Colonel S. C. F. Peile (who presented the pipe to the Horniman Museum), in writing to me in December 1896 from Rangoon, says, "I picked up a rare pipe the other day in the Arakan Hill Tracts belonging to a "tribe called Chimmé," and when he returned to London in June 1897 he brought it with him. The gourd is partly filled with water, and the smoker sits down to enjoy his pipe. By its side in the photograph I have placed a Quaymu pipe (*b*) to show the size.

II. The second illustration represents some pipes smoked by the women only among the Shindoos, a tribe which inhabits the country north of the Province of Arakan.

SHINDOO SMOKING PIPES

Here again we see the gourd, but this time used in quite a different manner. The clay bowl is fitted with a small bamboo receptacle beneath for the tobacco juice, which is collected, mixed with a little water, and then given to the men who carry it about in a small gourd from which sips are occasionally taken. The men carry these gourds in their belts, and when they meet a friend they hand it to him; he takes out the stopper, places his finger over the hole, and gives it a shake up; he then licks the finger with the nicotine. The juice in course of time makes the gourd turn a dark, rich, brown colour.

A similar pipe is used by the Nágás. Dr. George Watt, C.I.E., makes the following statement which explains this custom: he says, "Among the Angámi Nágás, "a wild hill tribe inhabiting the north-eastern frontier of India, a sip of nicotine is "considered a rare luxury. It is prepared by the old women, who smoke all day and "spit into a vessel placed near them for this purpose. The liquid is boiled down, and "in a condensed form is given to the men, who carry it about in small vessels (gourds). "These they present to each other on meeting as a friendly salutation, the tip of the "finger being dipped into the nicotine and then placed on the tongue."

The above specimens were brought from Lower Burma by Mr. Thos. H. Rooke. Nos. 1 and 3 have clay bowls and bamboo nicotine receivers; 2 has a clay bowl, broken; lower part made of horn; handles of each lacquered red. The gourds are those used to carry the finished nicotine solution.

Gourds are also used for pipes by the natives of East Africa; some good specimens are in the British Museum.

R. QUICK.

Ireland: Ogham. Macalister.

External Evidences affecting the Problem of the Age of Ogham Writing in Ireland. *By R. A. Stewart Macalister, M.A.* 4

Two views of the age of Ogham writing in Ireland have been held and strenuously supported. The first regards all existing monuments as pre-Christian, and considers all crosses or other Christian symbols upon them as subsequent additions. The second considers the script itself (and consequently all examples of the use of the script) as entirely post-Christian in origin. No one seems willing to accept a compromise, whereby the script might be considered of pre-Christian origin, but continued in use till many years after the establishment of Christianity. This, however, seems the view most consistent with existing evidence.

While it may be regarded as axiomatic that stones found on Christian sites, or bearing Christian symbols, are of Christian origin—the theory that crosses are all superadded is quite too far-fetched to be admissible—there are some which are evidently examples of the reappropriation of Ogham monuments for subsequent Christian use. Of such stones the best example is at Kilfountain, near Dingle; this bears on one face a cross and inscription, *Ginten*, in Irish letters; on the edge is an entirely independent and no doubt earlier Ogham, *Inisi*. The two have nothing to do with each other. The stone found at Glenfahan, also near Dingle, bears two crosses and an inscription which there seems every reason to regard as an occult or magical formula. Such a formula can scarcely be a Christian invention, and its inventors must have had some sort of script in which to write it down. (On this stone see *Trans. R.I.A.*, Vol. XXXI., p. 317.)

Thus even among stones with crosses upon them, of some the crosses are not conclusive evidence of date, and in others there is definite indication that the stone belongs to the Pagan-Christian overlap.

If now we turn our attention to stones not marked with the cross we find certain monuments which it would be very difficult to persuade ourselves (if we be unbiassed) are Christian. The three examples of Ogham writing found associated with stone circles need not be called in evidence, as in that case the monument must precede the Ogham; anything we know of stone circles suggests that they must be put back to an age quite too remote for writing to be contemporary with them. But we find Ogham writing in other connexions as well in which the disparity of date is by no means a probable hypothesis. Examples are (1) the very pagan looking tumulus at Lugnagappul, near Auniscaul, co. Kerry; a low mound of stones and earth, overgrown with furze, with stones set round its circumference—two of them Ogham inscribed. This monument is locally connected by tradition with a great battle, and is known as *Cnocán un fhola*, "the little hill of blood." It bears every indication of enclosing very instructive secrets. (2.) The great rude pillar-stone at Crag, near Tralee, inscribed, "Of Luguttis the Poet," and interesting as being the oldest monument of a poet in the British Islands. It would be difficult to conceive a more pagan-looking monument, unless it be (3) the imposing stone alignment on the top of a hill at Droumatouk, near Kenmare. This consists of a magnificent slab of stone, about 12 ft. in height, flanked on each side with two smaller but conspicuous stones. Who *Lugunis*, the occupant of this sepulchre, was, we do not know; but he certainly owns a royal monument. (4.) Lastly, a stone recently discovered at Dromlusk, in the same district, is in point. This consists of two stones in north and south alignment; on the eastern face of the stone bearing the Ogham is a circle engraved, in exactly the same technique as the scoring of the letters. Though solar symbolism and the like are generally discredited and ridiculed hypotheses in explaining monuments like this, it is impossible to free the mind from them in examining this stone. The meridian alignment and the east-pointing circle are very suggestive in this direction.

These examples make it at least admissible to doubt that all Ogham monuments are of the Christian period; and it follows that the script may reasonably be regarded as a pagan invention carried into the Christian epoch, and widely used long after the establishment of Christianity in Ireland. R. A. S. MACALISTER.

Folklore: Ireland. **Casement.**

Supplementary Note on Certain Wells in Ireland. (*Cf.* MAN, 1901. 11.) *By Roger Casement, British Consulate, Boma, Congo Free State.* **5**

In the article, *On Certain Wells in Ireland*, by Professor Rhŷs (MAN, 1901. 11), which is of uncommon interest, I observe that Sir Henry Blake speaks of a book by the Rev. Cæsar Otway, which he styles "Erris and Trelawney." I read the book many years ago, and if my memory serves me right, and with all respect to so distinguished an Irishman as Sir Henry Blake, the title should be "Erris and *Tyrawley*." *Trelawney* would be, I think, a Cornish name; *Tyrawley* is the name of a district in North Mayo.

The prefix *Tyr* (or *Ter*, as Sir Henry Blake himself applies it in speaking of the island of Termoncara) was one common in Celtic Ireland in territorial designations of tribal divisions of the country. We find it to-day in *Tyrone* (formerly *Tyr* or *Tir*-Owen), *i.e.*, "the land of Owen"; *Tyr*-connell or Eoghan (now Donegal), *i.e.*, the land of Conail or Connell, whose descendants, the O'Donnells, were chiefs of Tyr-connell.

Regarding strange Irish wells, I enclose an account of some remarkable wells in the county of Antrim in 1683, as recorded by Mr. Richard Dobbs, of Castle Dobbs, in that county. ROGER CASEMENT.

*** *We hope to publish under a subsequent number some extracts from the MS. of Richard Dobbs. Otway's "Erris and Tyrawley" was published in* 1843.—ED.

Stonehenge. **Gowland.**

The Recent Excavations at Stonehenge, with Inferences as to the Origin, Construction, and Purpose of that Monument. *Abstract of a Report presented by W. Gowland, F.S.A., to the Society of Antiquaries, December 19th,* 1901. **6**

The fall of one of the uprights of the outer circle of Stonehenge on the night of 31st December 1900 (*cf.* MAN, 1901. 18) led the owner, Sir E. Antrobus, Bart., to permit a careful examination of the remainder by a committee appointed for this purpose, and to execute the works recommended by this committee for the protection of the stones from further damage. The engineering work was planned by Mr. Carruthers and superintended by Mr. Detmer Blow. The exploratory work was conducted by Mr. Gowland, and a most careful record was kept of every detail of the incidental finds.

The primary object, the replacement of the "leaning-stone" (*see* illustration on next page) in its original erect position, was effected by enclosing the stone—which had declined from 77 degrees in 1650 to the dangerous angle of 61 degrees in 1901, and which showed three serious fissures on its upper side—in a cradle of stout timbers, and raising it with ropes and winches, while supporting it also on the underside by struts of stout timber. To secure it for the future the whole of the underlying soil was removed in successive sections down to the rock level and replaced by concrete; and it was in the course of this excavation that the discoveries to be described were made.

As to *foundations*, the "leaning stone" was found to go down 8 ft. below the surface datum, to terminate obliquely, and to rest upon two "sarsen" supports. Its fellow, the "recumbent stone," had been supported on one face by a pile of "sarsen" blocks, and on the other by two large blocks, by which a row of stone mauls (*see* below) was found, which seem to have been used to wedge the "recumbent stone" tight. If set back in its place thus indicated the "recumbent stone" would be exactly in line with the "leaning stone."

The principal objects found were (1) chippings from the great blocks, (2) implements, (3) bones and coins. The *chippings* were of all the varieties of stone known to have been used in the monument. Professor Judd, of the Royal College of Science, is engaged on a detailed report on their characters. They lay far too deep to have been merely the work of despoilers, and show that all the stones were worked upon more or less after their arrival on the site of erection. The proportion of "sarsen" chips to bluestone shows, however, that the "sarsens" must have been dressed roughly before their arrival, and only finished at Stonehenge; while the bluestones must have been wholly dressed on the spot. Professor Judd regards the "bluestones" as ice-borne boulders, the relics of a former drift-deposit. They were probably commoner formerly than now, and an accidental abundance of them at or near Stonehenge may have helped to determine the selection of this site.

The *tools* were of several kinds: (1) haches, longer or shorter; (2) an intermediate type much chipped and blunted; (3) hammer-axes; (4) intermediate types of hammer-

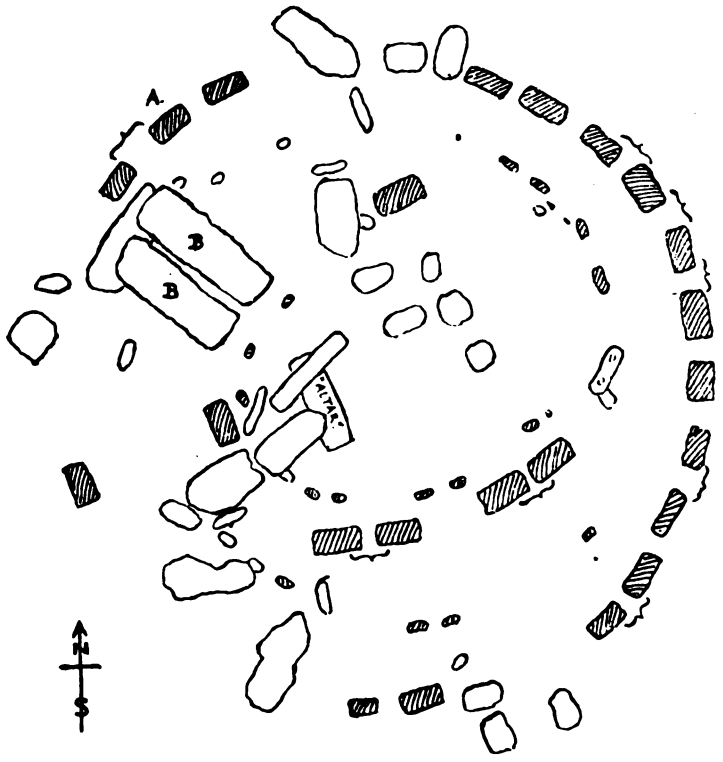
VIEW OF STONEHENGE FROM THE WEST.

A. *Stone which fell in* 1900. BB. *Stones which fell in* 1797. *The "Leaning Stone" is that in front of which the man stands. The "Recumbent Stone" is behind his extended arm.*

stones with traces of an edge—types 1 to 4 being all of flint unhafted and too brittle for use on "hard sarsens" or "bluestones," though serviceable for the softer varieties; (5) regular hammer stones of quartzite, more or less chipped, from 1 lb. to 6 lbs. in weight; (6) quartzite mauls, with two well-defined faces, and traces of a waist as if to hold a rope; these weighed from 37 lbs. to 64 lbs. The use of these mauls is illustrated from Japan, where great mauls of this kind are raised and let fall by ropes held by several men, while another man directs their aim by a wooden handle. Similar mauls are noted from Llandudno, and from the shores of Lake Superior. Throughout it should be noted that for mason's work of the kind required fine tools would be out of place; and that both for breaking great stones into shape and for trimming the faces the great mauls would be the most appropriate implements.

The *bones* were only of domestic animals, with the exception of certain antlers, which were used as picks. Coins, even of Roman date, were found only in the superficial layers, and occasionally in odd juxtaposition of different dates.

Only one trace of copper or bronze occurred, other than coins and superficial finds; a mere stain on a trimmed block of "sarsen" from a depth of 7 ft., and all that was required could have been accomplished with stone tools, antler picks, timber props and frames, and ropes of hide. The results of the excavation show that neither for the transport of the stones nor for their preparation and erection was any knowledge of metals necessary. In Japan, for example, where megalithic remains are abundant, and megalithic methods survive, the 17th century castle of Osaka contains blocks measuring 40 ft. by 10 ft. by 5 ft. or more, and weighing upwards of 160 tons; and Japanese drawings show stones of many tons weight carried, by mere man power, on a timber frame with cables attached, without the use even of rollers.



PLAN OF STONEHENGE.

A. *Stone which fell in 1900.* BB. *Stones which fell in 1797. The "Leaning Stone" is the shaded* (i.e., *standing*) *stone next south of* BB. *and a little west of the "Altar"-Stone. The "Recumbent Stone" is immediately south of the "Leaning Stone."*

As to the *dressing*, the tabular structure of the "sarsens," and their great inequality of hardness, makes very little working necessary. They seem to have been broken to shape by alternate heating and chilling, and by the use of the heavy mauls; but their preliminary dressing took place, as already stated, at a distance, and all that can be seen at Stonehenge are the grooves pounded out by the mauls and the traces of the sideward blows by which the intervening ridges were obliterated. The bluestones show no grooves, but also no such careful shaping as that of the "sarsens."

The *surface tooling* was effected by the hammer-stones noted above, and has been reproduced very closely by Mr. Stallybrass.

The *mode of erection* was shown conclusively in the course of the excavations and differed in different cases, for the "recumbent stone," 25 ft. long, went only 4 ft. into the ground, while the "leaning stone," 29 ft. long, went 8 ft. down. The reason is obvious, for the two stones were set up as a pair, to carry a lintel, in the most important

part of the whole structure. The shorter stone, therefore, being set less deep, had a more elaborate base, and, to gain base, was only dressed on the parts which showed above ground. The leaning stone was erected by (1) excavating a pit with three vertical walls and one sloping rim on the side next the stone; (2) raising the head-end of the stone by levers and timber packing till its foot slid down the sloping rim into the pit; (3) hoisting it from about 50 degrees into an erect position by ropes; (4) securing it in place by the smaller "sarsens" which support its oblique lower surface. Similar leverage is customarily employed in Japan with trunks of trees, and many rope-ends each pulled by one man.

The "recumbent stone," on the other hand, was (1) supported at its foot-end on a low wall of small "sarsens"; then (2) tipped upright, as above, against two large "sarsens" placed in front; then (3) packed tight, as above, with disused mauls.

The *chronology* also receives important new light from these excavations. A legend is current that the "bluestones" circles are of earlier date than the "sarsens," and that they were brought from Ireland. Both statements prove to be inaccurate. "Sarsen" chippings go right down to the bed rock, along with chippings of "bluestone"; the "sarsens" prove to have been raised from inside, which could only have been done before the "bluestones" were set up, and there is evidence for a much less remote origin for the "bluestones" than Ireland.

The *absolute age* of Stonehenge also may be inferred within certain limits. No bronze or iron tools occurred in the lower layers; the work seems to have been done throughout with stone implements; the types found have a neolithic look; and, even if metal tools were of no use for this particular work, it is difficult to believe that, if the monument were of the Bronze Age, no bronze implement would have been lost in the course of its erection. On the other hand, the stain of $CuCO_3$, already mentioned, shows that copper or bronze was already known, though probably not as a useful metal, and it must be remembered that the area at present excavated is but a fraction of the whole site. Now the beginning of the Bronze Age is given for Britain by Sir John Evans at 1400 B.C., and by Canon Greenwell at 1000 B.C., and for Northern Italy by Montelius at 2000 B.C. But these dates are for *implements*, and implements presuppose a long transitional period of acquaintance with the metal. The evidence, therefore, points at present to a date about 2000–1800 B.C. for the structure.

The purpose of Stonehenge was not sepulchral, but is probably connected with some form of sun-observance. In Japan, also, the orientation required for the sun-festival is obtained by the use of a pair of natural monoliths. There is no evidence of foreign influence; every nation which keeps sun-observance inevitably develops sun observing instruments on its own account.

In discussion, Sir Norman Lockyer described the attempts of Mr. Penrose and himself to ascertain the date of Stonehenge by the same astronomical considerations as they had applied to "sun temples" in Greece and Egypt respectively. The need for an approximate determination, if not of a solar year, at least of the seasons of ploughing, &c., led inevitably to the invention of means to determine equinoxes, May and November seasons, and more especially solstices, as at Stonehenge. Petrie's determination of azimuth for Stonehenge did not seem to him well founded, and Mr. Penrose and he had attempted a new determination; which gave azimuth 49° 34′ 18″, and obliquity 23° 54′ 20″. Now the obliquity in 1901 is 23° 27′ 1″, which gives an approximate date for Stonehenge of 1680 B.C., with a margin of error "± 200 years." He regarded Stonehenge as an important member of an early series of related monuments.

Dr. Maskelyne pointed out that bronze tools would not work "sarsens," and Mr. Penrose supported Sir Norman Lockyer's contention.

Dr. Garson compared the results of recent excavations by a British Association committee at Arbor Lowe (*Proc. Brit. Assoc.*, 1901, Glasgow, forthcoming).

Sir Henry Howorth asked how the stone sockets and dowels, which he compared with those of a Swedish circle, could have been made with stone tools.

Mr. Gowland, in reply, pointed out (1) that in Japan such sockets were made commonly by pounding and bruising; (2) that the absence of bronze implements made it improbable in any case that bronze tools had been employed; (3) that the reason for the absence of the smaller chips of "sarsen" was that pounding produced not chips but powder and granular pieces, except where large fragments were broken away at once.

REVIEWS.

Egypt. **Petrie.**

Recent Excavations on Prehistoric and Dynastic Sites in Egypt.

Diospolis Parva, the Cemeteries of Abadiyeh and Hu, 1898–9. By W. M. Flinders Petrie. Special Extra Publication of the Egypt Exploration Fund. **7**

The Royal Tombs of the Earliest Dynasties, 1901. Part II. By W. M. Flinders Petrie. Twenty-first Memoir of the Egypt Exploration Fund.

Diospolis was held back by the author to enable him to issue without delay his account of the subsequent season's work at the royal tombs of Abydos. But the postponed volume is not inferior in real interest even to the first instalment of the *Royal Tombs*, nor indeed to any volume of the series in which it appears. The title of the memoir conveys no idea of the true significance of the book. The cemeteries of Abadiyeh and Hu, indeed, proved rich in prehistoric objects and not uninteresting for subsequent periods though strangely deficient in inscriptions. Besides these cemeteries, a Ptolemaic temple enclosure at Hu was investigated and found to have been converted in Roman times into a fortress. Here a soldier had left a record on a potsherd in some script and language of Asia Minor, which now presents a puzzle to the learned in such matters. But the great importance of the volume lies in the attempt which Professor Petrie makes to utilise his observations, and those of Quibell, Randall-MacIver, and others, on the prehistoric remains in Egypt, for establishing a system of dating them. This dating is not by years but by sequences, and the sequences are those of development or changes of style, which of course may not be in strict historical order, and would hardly have prevailed over all the country alike. There is seldom any stratification or even superposition of the remains to guide the archæologist. The prehistoric cemeteries, which abound in Upper Egypt, are spread over wide areas on the edge of the desert so that the graves interfere little with each other. Petrie has had to depend for his guidance on style and association alone. A sketch of the ingenious system by which he worked the results of his mass of observations into a practical form was first given in the *Journal of the Anthropological Institute*, XXIX., pp. 295, *et seq.* The main guide is the pottery, a specimen or two of which was seldom absent from a grave. Other classes of remains were far less common than the pottery and must therefore be dated by the latter; they may, however, usefully supplement that evidence confirming a view previously held, or deciding between views as to which the evidence of the pottery would be evenly balanced. No country has hitherto yielded such abundant and comparatively full record of its prehistoric age of stone and bronze in Egypt. The only pure stone age, however, known there is that which produced implements of palæolithic type, the civilisation of the prehistoric cemeteries does not seem to extend behind the period when copper was utilised. It may here be remarked that Petrie believes that palæolithic man continued in the Egyptian deserts down to the time when the Nile began to deposit alluvium. The rich soil then attracted a superior African race which already employed metal (hammered, not molten?) and made fine pottery by hand without the wheel and soon exterminated or absorbed the weaker aborigines. Petrie recognises survivals of the old race (as slaves?) amongst the new in the steatopygous statuettes found in the earliest graves. Seven chapters in *Diospolis Parva* are occupied with a statement

of the method of classification and with discussion of the pottery, the stone vases, the slate "palettes," the ivories, the stone and metal tools, the amulets and beads, and finally with an outline reconstruction of the prehistoric periods. Taking a series of numbers from 1–100 to represent the division of prehistoric remains in Egypt, Petrie starts his classification at S.D. (sequence date) 30, so as to leave room for earlier phases when discovered, and ends at S.D. 80. Between the latter time and the First Dynasty (Menes) there seems to have been some interval by the style of the remains, and this gap Petrie would fill with Manetho's dynasties of Thinite kings preceding Menes, of which he recognises traces at Abydos and Hierakonpolis. He considers the best period of art to have been in the thirties when the pottery had the purest forms. But greater evidence of wealth and technical skill is found from S.D. 50–60, which Petrie considers to have been the acme of prehistoric civilisation in Egypt. "We see, then, the most "elaborate flint working, with perfect serial flaking, the best metal work . . . "the more valuable beads of gold turquoise and amethyst, the greatest profusion of "hard stone vases, and the greatest amount of decorated pottery (perhaps rather "from 45–55.)" Petrie detects a marked change about S.D. 40, which he is inclined to attribute to the influx of a new people, perhaps from Syria, amongst the earlier population of Libyan stock. The first remains of the copper-using race Petrie would place about 7,000 B.C., considering that the Nile deposit must have begun about that time. The date of 7,000 B.C. may never be verified, but Petrie's sequence-dates for the prehistoric remains ought to be verifiable by his own future researches and those of other explorers. Besides Mr. MacIver's and Mr. Garstang's work of last season, there has also been the expedition of the University of California working among the prehistoric remains on scientific lines. Mr. MacIver's "eastern" cemetery at El Amrah, excavated this year, (see MAN 1901. 40) yielded the whole of the prehistoric sequences and reached down to the period of the First Dynasty, thus bridging the archæological gap after S.D. 80 left by Petrie in *Diospolis Parva*.* Other cemeteries cover only small portions of the whole. Careful deductions from observations on such points should soon settle the succession to the satisfaction of all. Unhappily the cemeteries are being ruined wholesale by plunderers, so that there can be few now remaining intact. The observations hitherto have all been carried on amid the embarrassing wreck of recently plundered graves, otherwise the problem would have been far easier of solution and the results much fuller than they actually have been. A glance at the plates will convince the ethnologist as well as the student of prehistoric remains of the extraordinary importance of this oldest but most recently explored field of archæology in Egypt, and they will be grateful to Petrie for his courageous and brilliant effort to co-ordinate the results.

The work amongst the *Royal Tombs* of Abydos seems to follow naturally on the prehistoric archæology of *Diospolis Parva*. At Abydos, Professor Petrie has been working through the remains of the earliest dynasties, I. and II. of Manetho. In some cases the royal names found in these tombs are recognizable in the New Kingdom lists, though always more or less deformed and misunderstood. The greater number, however, must be arranged according to circumstantial evidence, sequence of style, &c. At that time, as also at some later periods, changes in fashion were evidently very rapid within certain limits, so that in general the succession of kings, thanks to a few fixed points, can be made out with surprising ease and certainty. Here again a great stumblingblock is the mixture of remains through ancient and modern plundering, so that the attribution of graves to particular kings is often a matter of speculation. 8

* Mr. Mace informs me that the latest discoveries show S.D. 80 to have been contemporary with, or even later than, Menes, thus abolishing the gap from S.D. 80 to 100. In general, Professor Petrie's conclusions are confirmed from S.D. 30 to 80.

Menes, the founder of Dynasty I. of Manetho, is an important starting point. There seems little doubt that he is identical with a king generally called by the "Horus-name" Aha on contemporary remains, though the "personal" name Menes (MN), by which he was known later, occurs only once. The style of Aha's inscriptions is important as a link between the style of his successors and that of other kings who must have preceded him. Petrie at present recognises three or four kings before Menes. Egypt under the early dynasties was still in the flint and copper stage; bronze is not found before the Sixth Dynasty. Apart from the vessels in hard stone, which were finely shaped even in the early prehistoric periods, there are excellent carvings in relief and short inscriptions earlier than Menes. It may be recollected that the end of the Third Dynasty and the beginning of the Fourth is the time when the solid rectangular mastaba-tomb with sloping sides passed rapidly through the step-pyramid stage and culminated in the perfect pyramid of Khufu. At the same time the walls of private tombs in the Memphite region were covered with a profusion of exquisite sculptures and paintings.

The royal tombs at Abydos belong in part to kings just before Menes, in part to the Menes (the First) Dynasty of about eight kings, in part to the Second Dynasty, which consisted of about nine. Garstang's work at El Ahaiwah shows that some of the tombs of the early Third Dynasty kings were in the same district, so that we may hope soon to have a continuous series of dated remains connecting the Fourth Dynasty with the prehistoric period. There is certainly a vast gap between the First Dynasty and the Fourth in the archæology as in the history; changes were proceeding rapidly amid much fluctuation of artistic power and finish. One might expect the accompaniments of a royal tomb to be all of the finest workmanship, but this is certainly not the case at Abydos. The inscriptions on ivory and ebony are often mere ugly scrawls, though the bad pieces are interspersed with an occasional good piece. The level of that art during the First and Second Dynasties would seem to have gradually receded rather than advanced, but we cannot be sure that the pieces found at all represent the higher levels of workmanship of the time. It may not have been the custom, especially as culture developed, to waste good work wholesale by burying it in graves. The fine work was very probably reserved for the open parts of the tomb, and all or most of this has perished or disappeared. In almost every tomb, however, of the earlier time, fragments or samples of exquisite work have been found. Such, for example, are the fragment of a crystal vase (*pl.* V. 12), carved marble (*ib.* 15), the ear of barley (*ib.* 16), all from the tomb of Zer. In the tombs of Dynasty II., where little that can display art is found better than the clay sealings applied to the mouths of vessels, the seals were very neatly arranged and engraved. The stelæ with the name of Perabsen of the Second Dynasty, which were probably visible after the tomb was closed, are in a fine style.

It must always be remembered that these great brick tombs—which seem to have had floors, roofs, and in some cases linings of wood—together with their countless offerings in jars and boxes, were almost utterly destroyed by fire, as well as plundered again and again, not least during the years 1895–8. Flinders Petrie and his coadjutors are to be congratulated on the splendid results brought out by scientific methods from a wreckage and confusion apparently hopeless. F. Ll. GRIFFITH.

Fishery. **Jankó.**

Primitive Methods of Fishing in North-Eastern Europe and Northern Asia.

Dritte Asiatische Forschungsreise des Grafen Eugen Zichy, Band I. *Herkunft der Magyarischen Fischerei.* Von Dr. Johann Jankó. Leipzig: Hirsemann, 1900. 4to, pp. 708. With 17 plates and 544 blocks in the text. Price £1 17*s.* 6*d.* 9

In this work—in two folio volumes, printed in German and Hungarian in parallel columns, well got up and adequately illustrated—Dr. Jankó gives an account of much of

the work done during Count Zichy's third ethnographical expedition, of which he was a member. Before starting six months were spent in studying the collections and literature accessible in Russian and Finnish museums, and the wealth of comparative matter accumulated would suggest how necessary this was even if the author in his introduction did not pay full tribute to the help thus derived. The first part of the work comprises an elaborate account of the different methods used for catching fish in enclosures (corrals). This method, it is pointed out, can only be used when shoals of migratory fish are on the move, and depends essentially on their tendency to track along any obstruction rather than be turned aside. Hence the simplest form of corral consists of a couple of rows of stakes converging towards each other so as to enclose a V-shaped space, at the apex of which is a small closed chamber in which the fish collect. This is, in fact, the form from which most of the elaborate corrals figured are derived, whether as on the Neusiedler See there are many compartments leading into each other, and constituting for the fish a veritable maze, or as on the Dnjestr a simple chamber approached round a complicated system of palisades. The various forms of fish weirs are then discussed, and in connection with these many forms of baskets and traps, some resembling our eel baskets and lobster pots, are figured. The simplest form of weir described is that in which walls, roughly built of stone as in the Scotch salmon cruive, stretch from the two banks of the stream towards each other, just failing to meet at the centre, where some form of trap is interposed. The difference between these and some of the simpler forms of corrals is but slight; probably the author lays too much stress on the quality of permanence in such structures constituting a weir: certainly some of the large examples figured as occurring, *e.g.*, on the Volga, might equally be called corrals, in which the usual kidney-shaped chamber was replaced by a large rectangular palisade box.

Seines, tramels, clap and hoop nets, and trawls are considered. The casting net, to which considerable attention is paid, resembles that in use among the Malays, and is stated to have been picked up from Greek fishermen on the shores of the Black Sea, and to be perhaps Persian in origin. The snaring of fish, which occurs only in Western Europe, reached the Magyars through Germany, while the highly specialized forks or grains in common use, together with large and often elaborate snatch-hooks such as are used in the winter sturgeon fishery on the Volga, are Russian in origin.

The most interesting parts of the book is that which deals with angling. The earliest form of the craft is traced to the use of what, for want of a better term, I venture to call the gorge-spike (*Angelpflock*).

This simple contrivance introduced to the Magyars by the Turks, and still used by children in Northern Germany, consists among the Jakuts of a piece of bone about 1½ inches long, sharpened at both ends. The bait is impaled on it, and the spike is then tied to the line by its centre. The fish is allowed to gorge the bait, which it does by swallowing the spike longitudinally, a sharp tug on the line then brings the spike across the victim's gullet or stomach, which is usually transfixed. Passing from this, there is in the museum at Helsingfors what is probably the simplest form of hook extant. This consists of a V-shaped piece of wood with sharp pointed arms of equal length, the running line being knotted by a modified half hitch to the apex of the V. A hook similarly knotted on, but with one arm only sharpened and shorter than the other, is also figured. Then come the well-known composite hooks with a nick cut on the shank for the reception of the snood. These are unbarbed, as are the simplest iron hooks figured, which are, however, eyed. One primitive form of hook, consisting of a portion of the trimmed stem of a thorny plant, with a suitable spine left attached, such as still occurs along the Essex coast, is not mentioned, and presumably is not met with among the Magyars. Composite hooks are still used among the Ostjaks in combination

with a primitive form of trimmer—the *luma*. This consists of a somewhat flattened, pear-shaped piece of wood, to which the running line is fastened, and round which it is then carried in a series of loose figure-of-eight loops. The whole is then dropped in the water with a dead bait impaled on the hook, or it is balanced on the water's edge so that the fish easily pulls it into the water, the running line being often carried over the fork of a stick from which the fish can easily free it in its struggles. Another method is to firmly tie a shortish line to a large gourd. This, presumably live baited, is thrown into the water, and then connected with a peg on the bank by a thread so weak that the fish can easily break it, and tow the gourd about in the water. A form of double and even treble composite hook with a long shank, resembling in a general way our gorge trolling hook, is used for live baiting, when it is tied either to the bait's side, or the shank is introduced at the mouth and passed out at the gills. Live baiting for *Silurus glanis* with a frog, with the help of a small horn-like or heart-shaped piece of wood used to beat the water, is fully discussed, and the belief entertained by the fishermen that the noise so produced resembles the croaking of a frog, or acts as a sexual lure to the cock fish, is shown to be untenable. Various accessory pieces of fishing apparatus, ice axes, sinkers, &c., are figured throughout the book, which closes with a *résumé* of the origins of the various fish-catching appliances in use throughout the ethnographical district inhabited by Magyar and kindred Ugrian peoples.

A primitive form of fish weir and the *luma* are considered to date back to times when the Ostjaks, Finns, and Magyars still lived together. Fish baskets and traps were invented after the Finns had split off, when a large number of new appliances were introduced by successive waves of Turkish immigrants. Fresh hordes of Asiatic invaders then carried the Magyars and their Turkish conquerors westwards, where Russian, Greek, and lastly western methods of fishing were learnt. Finally, a discussion of the geographical distribution of the pike, carp, and *Silurus glanis*, and the names for these fish leads the author to infer that the region immediately west of the Urals and south of latitude 55° was for long the dwelling-place but not the cradle of the Ugrian-Magyar stock. C. G. S.

America. **Udden**

Pre-Columbian Archæology in Kansas, U.S.A.

An Old Indian Village. By J. A. Udden (*Augustana Library Publications*, No. 2). Rock Island, Illinois, 1900. 80 pp. **10**

This pamphlet contains an account of the exploration of a village site south of the Smoky Hill River, Kansas. The antiquities discovered consisted of objects in stone and bone, with fragments of pottery, mostly of types familiar to us through the work of explorers in States lying further east. They were chiefly excavated from low flat-topped mounds which had formed the platforms or bases on which dwellings had been erected. An interesting object was a small piece of chain-mail, the occurrence of which leads the author to conjecture that the village may have received a visit from the Spaniards at the time of Coronado's Expedition in 1542. In support of this view he gives a map (p. 75) showing the probable route taken by the Spaniards according to various authorities. Mr. Udden has performed his task very thoroughly, and has illustrated his paper by a number of excellent process-blocks. He disclaims the title of archæologist, and announces that the present work will be his last on an antiquarian subject. We may be permitted to hope that he will ultimately change his mind, and give us similar monographs on other interesting localities in the United States to which the exercise of his functions may call him. O. M. D.

PROCEEDINGS OF SOCIETIES.

Proceedings. Soc. d'Anthr. de Paris.

Sommaire des Procès-verbal de la Séance du 21 *novembre* 1901.—Le Prix Bertillon a été attribué (ex æquo) à MM. Cauderlier et Ripley, avec mention très honorable à M. Macquart. Le Prix Godard a été attribué à M. Volkov, avec médaille de bronze à M. Titchener. 11

M. Zaborowski: Nouveaux crânes du caucase. Discussion: M. Delisle.

M. A. Dumont: Démographie du département de Lot et Garonne. Discussion: MM. Yves Guyot, Paul Robin, Sanson, et Delisle.

M. le Dr. Felix Regnault: Ostéogénie. Discussion: MM. Verneau, Papillault, et Azoulay.

M. Bloch: Preuves ataviques de la transformation des races. Discussion: MM. Nicole, Dumont, et Regnault.

Séance du 5 *décembre* 1901. Présentation et don d'objets de Madagascar par M. le Dr. Danjou. Discussion: MM. Volkov, G. Raynaud, P. Robin, Manouvrier, Vinson, A. de Mortillet, Y. Guyot, et Delisle.

Elections: Bureau pour l'année 1902. Président, M. Verneau; 1re Vice-président, M. d'Ault du Mesnil; 2e Vice-président, M. Deniker; Secrétaire général, M. Ch. Letourneau; Secrétaire général adjoint, M. Manouvrier; Secrétaires annuels, MM. Papillault et Anthony; Conservateurs des Collections, MM. A. de Mortillet et Ed. Cuyer; Bibliothécaire-Archiviste, M. Zaborowski; Trésorier, M. Daveluy; Commission de Publication, MM. Hervé, Capitan, et Yves Guyot.

Proceedings. Anthropological Institute.

Ordinary Meeting, 26th November 1901. Mr. C. H. Read, F.S.A., President, in the chair. The election was announced of Mr. H. B. Johnstone as a Fellow of the Institute. 12

Mr. E. Willett exhibited and described a number of *Palæolithic Implements from Savernake*. His paper will be found in full, with the discussion, in *Journ. Anthr. Inst.*, XXXI.

Mr. N. W. Thomas exhibited a collection of objects collected by the Hon. Auberon Herbert, and described by him as "Totem stones" (see *Times*, September 3rd and 7th, 1901, and subsequent letters).

Rev. R. F. Gatty exhibited and described a number of *Diminutive Flints from the Sand-mounds of Scunthorpe*. An abstract of the paper will be found in MAN, 1902. 15 (hereafter).

Ordinary Meeting, 10th December 1901. Mr. A. L. Lewis, F.C.A., treasurer, in the chair. The election was announced of Messrs. S. H. Williams, W. W. Thorn, and F. Eyles as Fellows of the Institute.

Mr. T. C. Hodson read a paper, illustrated by numerous exhibits, on the *Native Tribes of Manipur*. It will be found in full in *Journ. Anthr. Inst.*, XXXI.

Mr. S. H. C. Hawtrey read a paper on the *Lengua Indians of the Gran Chaco of Paraguay*, which will be found in full in *Journ. Anthr. Inst.*, XXXI.

Proceedings. Society of Antiquaries.

Ordinary Meeting, 19th December 1901. The Right Hon. Viscount Dillon, President, in the chair. 13

Mr. W. Gowland, F.S.A., presented his *Report on the Recent Excavations at Stonehenge*, of which an abstract is printed above (MAN, 1901. 6). Discussion: Sir Norman Lockyer, F.R.S.; Dr. Maskelyne, F.R.S.; Mr. F. G. Penrose, F.R.S.; Sir Henry Howorth, K.C.I.E., F.R.S.; and Dr. Garson.

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PREHISTORIC EGYPTIAN FIGURES.

ORIGINAL ARTICLES.

Egypt. With Plate B. Petrie.

Prehistoric Egyptian Figures. *By W. M. Flinders Petrie, D.C.L., LL.D., Edwards Professor of Egyptology at University College, London.* 14

The following figures have been collected in Egypt, mainly from prehistoric graves, but have not yet been published :—

1. A kneeling figure of a captive, carved in hard red limestone ; a splinter of rock crystal inlaid in the eye (the other eye broken), and another piece of crystal inlaid on the top of the head.

2. A figure carved in hard red limestone with the usual domed head and pointed chin of the prehistoric people. The truncation of arms and legs is seen also in early figures (as the arms of the steatopygous figures) and in the historic times of the dolls of the twelfth dynasty.

3. Ivory figure of upper part of body ; a long strip of gold has been bound round the neck and forms a loop above the head for suspension. It has been greatly worn by use as an amulet.

4. Figure in brown steatite with suspension hole in lower end.

5. Ivory double-faced head, broken from a long ivory tusk carved with a head. This is one of the best examples of such figures for the style of the face.

6, 7. Ivory combs with heads carved upon them, and necklaces shown by three rows of dots. All of these heads show the usual type of prehistoric Egyptian (cf. *Journ. Anthr. Inst.*, Vol. XXXI., Pl. XVIII., 1–5).

8 to 16. A class of amulets which have become so degraded in copying that it is difficult to be certain of their origin. An example found at Abydos last year, however, showed that these were bulls' heads ; the muzzle has become a cylinder with a ridge found it, the eyes have been put too high up, and the horns brought round on the face. The materials are—8, clear serpentine ; 9, carnelian ; 10, green serpentine ; 11, black steatite ; 12, yellow and black serpentine, back view showing the suspension hole usual in these ; 13, carnelian ; 14, black steatite with white shell eye inlaid ; 15, slate ; 16, black steatite, probably later, and looking much like late Roman work. All the above are full size.

The following figures are two-thirds size :—

17. Bird flying, chipped in flint.

18. Serpent, chipped in flint, from Koptos.

19. Dog (?), chipped in flint.

20. Hippopotamus, chipped in flint, probably of the twelfth dynasty, from Kahun. These flint figures of animals are very rare, as I have only met, beside these, some more pieces of flint serpents.

21. Pieces of brown steatite, and of creamy limestone, of unknown use. About 20 such were brought to me together ; they vary in size, but are clearly in equal pairs. Perhaps some analogy or explanation for these can be suggested.

22. Lid of a pottery box, of the usual decorated pottery ; a red line scrabbling across it hardly shows in this photograph. Before baking, figures have been incised upon it, apparently two human figures, an ostrich and a scorpion. The white has been recently rubbed into the lines for photographing.

23. Ivory piece of unknown use ; four such were found together.

24. Model dagger in ivory ; the form of the handle is unlike any of the historic age, and the three rivet-holes across the end of the blade and the rib down the blade agree well enough with the copper dagger known to be prehistoric (*Naqada and Ballas*, Pl. LXV., 3). This probably shows, therefore, the mode of hafting the prehistoric daggers.

W. M. FLINDERS PETRIE.

England: Prehistoric. Gatty.

Pigmy Flint Implements from the Sand-beds at Scunthorpe in Lincolnshire. *Abstract of a Paper by the Rev. R. A. Gatty, L.L.B., presented to the Anthropological Institute, November 26th*, 1901 (*cf.* MAN, 1902. 12). 15

The object of this paper is merely to give a general account of a collection of flint implements of very small size, and of the site at Scunthorpe, Lincolnshire, on which these flints are found in great abundance, and to state certain inferences as to their origin which seem to be justified by the circumstances of their discovery, and by the close likeness which they present to the pigmy flints which are found in France, Belgium, and in India.

The neighbourhood of Scunthorpe is for the most part level, but a ridge of hills rises abruptly from the plain, and extends for thirty miles to Lincoln. The pigmy flints are found both on the hills and on the plain—on isolated sites, of which no less than seven are known. The whole district seems to have been covered with sand; in some places to a depth of 20 feet. This deposit may be of glacial detritus originally, but in its present stratified form must be due to the action of wind, as nothing marine is found in it, and in many places the sand, when exposed, continues to drift, and occasionally even blocks the road. The drifted sand forms mounds, occasionally as much as ten feet high, but usually much less, and it is on the floor of these mounds that the pigmy flints are found, in wind-blown depressions of irregular and shifting shape, which measure from 8 by 4 yards to 50 yards square, sunk from two to six feet below the surface. I have obtained more than 200 pigmies from one of these depressions, and my own belief is that they are the sites of habitations or workshops.

FIG. 1.—SECTION THROUGH DRIFTED SAND AND PEAT AT SCUNTHORPE: MR. GATTY IS POINTING TO THE SURFACE LAYER IN WHICH THE PIGMY FLINTS ARE FOUND.

Below the sand is a bed of peat some four feet thick, and below this a bed of valuable ironstone, which is being worked without difficulty by digging away the sand and peat. The whole series of beds is thus clearly exposed in successive sections. The peat is full of tree roots and pieces of timber; and a horn and part of the skull of *Bos primigenius* have been found it it. No pigmy flints, however, are found in the peat or *in* the superincumbent sand, but only *on* the surface of the sand.

The area where the flints are found is now uncultivated common, with but little herbage suitable for pasture; the rabbits which abound in the sandy soil must go some distance for their food, and water is very scarce, and in dry seasons almost unobtainable. It is therefore difficult to see what inducement would be offered to settlers. There are, moreover, no earthworks, and no trace of implements suitable for fighting; nor would the pigmy implements be of use to kill animals, even when captured, by snaring. In Roman times, nevertheless, the sandholes were occasionally

inhabited, for I have found a Roman coin, probably of the later Empire, and several fragments of bronze ornaments; pottery also occurs, both of Roman types and of the rough British fabric, decorated with rude patterns. All the objects of human workmanship from the flints onwards seem to me to be posterior to the deposition of the sand bed, and this in turn seems to exclude the idea that the flints belong to a period between the palæolithic and the neolithic.

No large implements or polished tools are found in the sand-holes with the pigmy flints, and very few ordinary neolithic implements of any kind, but those which do occur seem from their stratigraphical position to belong to the same date as the pigmies.

The pigmy flints, both worked and fragmentary, occur in great quantities—too great to be classed merely as workshop *débris*. Most of them seem to have been used for scraping or cutting, and the scrapers are the more common and go down to the smallest size; 64 circular scrapers weighing less than half-an-ounce. In form these more nondescript implements are very like those rough neolithic forms which do not generally find their way into collections, but seem nevertheless to have been used for the common purposes of everyday life.

Though the pigmies are found in such numbers together, and though the simple scrapers have clearly been struck off by a single blow, no cores have hitherto been found with them. Further search, however, may bring them to light, for it was not till after some time that I succeeded in finding the rhomboidal types which Mr. Pierpont in Belgium calls "trapezes."

There is no native flint at Scunthorpe, but flint pebbles could be obtained from the gravels of the river Trent some four miles away, or from the wolds of East Yorkshire; and the enormous quantity of small *débris* convinces me that the sand holes are the actual places of manufacture. I found, however, two implements of chalcedony, and of an Indian type, which gives them all the more resemblance to those of the Vindhya Hills.

The types which are represented are best described by reference to those brought by Mr. Carlyle from cave shelters in the Vindhya Hills in India, and examined and drawn to scale by Mr. Charles Seidler; and to the characteristic examples of both the Indian and the Scunthorpe series, which are figured herewith (Figs. 2 and 3). Mr. Seidler has kindly examined the Scunthorpe flints also, and reports as follows on their respective sizes:—

Smallest crescent - - -	India, $\frac{6}{16}$ in.	Scunthorpe, $\frac{6}{16}$.
Scalene - - - -	„ $\frac{10}{16}$ „	„ $\frac{3}{16}$.
Rounded and pointed - -	„ $\frac{10}{16}$ „	„ $\frac{4}{16}$.
Rhomboidal - - - -	„ $\frac{8}{16}$ „	„ $\frac{6}{16}$.

This identity of form deserves some consideration That "a common want" may make a "common tool" may be true enough when the use of a tool is clear, as in the case of an arrowhead or a scraper; but when the use is unknown, and when the tools occur only in rare localities, the probability increases that there is some other connection between them. For the sake of clearness I have discounted the very numerous nondescript pigmies; but as search goes on we shall probably have to admit a number of new types, *e.g.*, the minute points, which may have been the tips of blow-pipe darts.

Both at Scunthorpe and in the Indian cave shelters the pigmy flints were produced in enormous quantities. At Scunthorpe, indeed, a day's work will yield some sixty specimens. Further, if the pigmies were merely diminutive neolithic implements we should expect that ordinary neolithic tools would be found abundantly with them; yet none are found on the Indian sites, and very few indeed at Scunthorpe.

The principal Indian types are (1) triangular or scalene; (2) rounded at one end and pointed at the other; (3) crescent-shaped. The last-named is not so common at

Scunthorpe as the two former types. None of these types can be merely accidental; the circular flakes least of all, quite apart from the fact that they frequently show signs of wear on their edges. A knife-like form (which occurs also at Scunthorpe) has a cutting edge and a very thick circular back, well worked as if to afford a good grip. There is also a distinct chisel form with a bevelled edge.

FIG. 2.—SCUNTHORPE FLINTS.

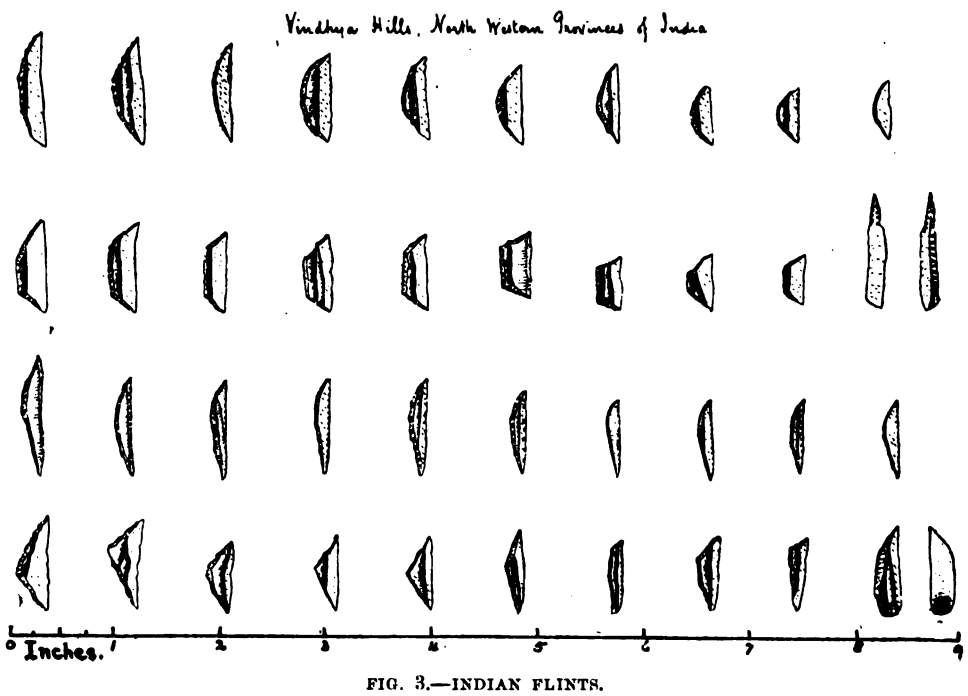


FIG. 3.—INDIAN FLINTS.

The triangular arrowheads (Fig. 4) speak for themselves. I have one in my collection somewhat fire-stained, which came, not from Scunthorpe, but from a similarly sandy common about five miles off. It was found, so the finder (Mr. M. Peacock, of Cadney) told me, in the bottom of a broken urn among burnt bones, and, though I did not see the urn myself, I have no reason to doubt his statement. This arrowhead measures $\frac{5}{16}$-in. long, and has no barbs.

FIG. 4. (¼)

It is, of course, often difficult to say how much of the work on a pigmy is due to definite flaking, and how much to use; but the flaking which results from pressure during use, especially in scraping, does not produce that regularity of chipping which is so marked in some of the finest pigmies.

As to their probable use, (1) the character of the implements is too well defined, and the working too regular to allow us to regard them merely as the teeth of a saw or of an instrument for wool carding. (2.) Mr. Pierpont suggests that the Belgian pigmies were used for tattooing, and figures an iron tattooing implement of similar form from the Congo; but the multitude of the pigmies on each single site makes this unlikely. (3) The fact that the Indian pigmy flints were found in cave shelters suggests, however, that they served some domestic purpose, and the delicacy of their fabric may be due to manufacture by the women, and as they certainly could be used to puncture skins, they may have been used in sewing. This, however, still leaves unexplained the borers, mere spines of flint without a cutting edge. (4.) The knife-like and chisel-like forms point to some practice of delicate carving on wood, bone, or jet. Yet no beads or traces of women's ornaments have been detected as yet at Scunthorpe. (5.) The suggestion that the crescentic pigmies were fish-hooks is negatived by the waterless character of the area; and (6) the idea that they are an accidental by-product of ploughing, by its barrenness, and by the total absence of all trace of former cultivation.

The considerations which seem to me to point to a distinct origin for these pigmy flints are mainly as follows:—

(1.) The variety of their types, and the care devoted to their manufacture differentiates them altogether from the ordinary neolithic borers.

(2.) Their absence from the vast majority of neolithic sites can hardly be due to the indifference of collectors. Mr. Worthington Smith writes from Bedfordshire, "I have "never found any pigmies. Of course I can find plenty of small irregular fragments "and artificially struck off flints, the small refuse from implements such as celts, arrows, "scrapers or borers; but anything like an extra small arrow, scraper, or borer I have "never found. There are none here." Mr. A. S. Kennard, of Beckenham, Kent, writes, "I have only found pigmies in two localities, one near Sevenoaks, and the other "at Sittingbourne. I have looked for them in vain in this district, though neoliths are "abundant." It is true that the Scunthorpe sands are easy to examine, and that the forms found there are well defined; but the correlative fac of the almost total absence of ordinary neolithic forms from the Scunthorpe and Indian sites seems to confirm the validity of the assumption that if pigmy flints had existed on neolithic sites, they would have been seen and reported long ago.

(3.) On the other hand, I have found pigmies myself at Bradfield, near Sheffield, high up on the Pennine range, and not far from the point where Dr. Colley March found examples under a peat bed, and also at Hooton Roberts near Rotherham in Yorkshire. So far as I know, there are some eight or ten places in England where pigmies have been found, but nowhere have they been discovered in such numbers, or so very small, as at Scunthorpe, where the circumstances, however, are unusually favourable. I think, therefore, that at present the evidence is against the supposition that the pigmy flints are of universal occurrence.

(4.) In France, however, and in Belgium, as we have seen, exactly similar types recur, and from India come the same types again. The exact similarity of type between

Belgium and India, and the absence already noted of neolithic types from pigmy flint sites, has led Mr. Pierpont to the inference that the pigmy flints are the work of a particular people; and all the evidence which I have got at Scunthorpe leads to the same supposition. I have endeavoured, however, to keep out the theoretic side of the question and to confine myself as far as possible to a plain statement of the facts as I have observed them.

R. A. GATTY.

Stonehenge. **Discussion.**

Recent Excavations at Stonehenge. *Abstract of the Discussion of Mr. W. Gowland's Paper on Stonehenge* (MAN, 1902. 6) *read at a Special Meeting of the Anthropological Institute, January 13th*, 1902 (MAN, 1902. 24). **16**

The discussion here summarised took place at a special meeting of the Anthropological Institute, of which the formal report will be found below (MAN, 1902. 24). The occasion was the delivery by Mr. W. Gowland, F.S.A., of a paper on *Recent Excavations at Stonehenge*, arising out of his Report to the Society of Antiquaries, of which an abstract will be found above (MAN, 1902. 6). After the reading of the paper :—

Mr. ARTHUR EVANS congratulated Mr. Gowland on the very complete and scientific record that he had preserved of the recent works on Stonehenge. For the first time they had before them the true "anatomy" of a part of the monument. At the same time he was unable to read the evidence quite in the same way as Mr. Gowland. Amongst all the stone implements discovered there was nothing distinctly neolithic. Mr. Gowland had laid stress on the absence of bronze implements as an argument for referring the date of the monument to at least the close of the Neolithic period. But under one of the sarsen slabs had been found traces of copper oxide, very probably left by a bronze implement. There was here an indication that the soil was not favourable to the preservation of that metal. On the other hand, a ground or polished implement or even a fragment of such must have been preserved. Mr. Evans himself (in a paper in the *Archæological Review*) had put forth the theory that the monument belonged to the late period of the Bronze Age. The low mound seemed to stand in a specially close relation to the latest class of the surrounding barrows belonging to that period. It was reasonable, moreover, to bring it into connection with the surrounding necropolis, and a characteristic "incense burner," like those of the barrows, has been found near one of the triliths. It was important to observe that Stonehenge was a very advanced representative of its class. Certain structural features, such as the mortices and tenons of the outer circle, even recalled the similar appliances of Greek temples like that of Segesta. Irish megalithic monuments of probably Bronze Age date did not show such advance, yet on the whole Ireland—that early "Eldorado"—was during that period ahead of this island in technical skill. As to the astronomical argument, applied to a rude stone monument it had very little force. Even in the case of Greek temples such deductions had led to errors of about 1,000 years. The religious connexions of Stonehenge were not a mere matter of conjecture, and sun worship was at most a secondary object in its structure. It was, in fact, one of a large series of primitive religious monuments that grew out of purely sepulchral architecture. The various features of the primitive chambered barrow—itself the outgrowth of the mound hut, such as may still be seen in Lapland and elsewhere—were all traceable here. There was the entrance passage which in the case of various barrows could be seen in the act of growing into the free-standing, honorific avenue. There was the stone doorway represented by the trilith—a form found elsewhere standing by itself in a sepulchral relation. There were the supporting ring-stones of the mound become, as in the case of some barrows, a free-standing circle. The entrance passage of primitive huts, as seen, for instance, in the Lapp *gamme*, faced the rising sun for practical

reasons. The entrance of our early chambered barrows was oriented in the same way. The orientation of the avenue of Stonehenge sprang from the same sepulchral source. The evolution of every feature of the monument could be traced by successive links from these sepulchral elements, and although doubtless we had here a building no longer confined to the mere worship of human dead but diverted to the service of higher spiritual beings, it must be regarded as closely connected with a chthonic cult. The solar element, if it existed, was certainly of a subsidiary nature. Whether actual interment went on within the building was a secondary question, though the finding of the "thurible" might be thought to point that way.

Mr. A. L. Lewis said: I am quite prepared to believe that the earthworks were made and a circle erected on the site of Stonehenge for purposes of sun worship or observation as long ago as 1800 B.C., but I am not equally prepared to admit that the ruin we know as Stonehenge is the original circle. I am still inclined to regard it as a much later reconstruction. I doubt whether there existed in this country nearly 4,000 years ago any people who could or would have cut the tenons and sockets on these stones and placed the lintels on the top of the uprights; and, if such a people did exist, I cannot understand why they left no other such remains behind them. We know of the remains of perhaps 200 circles, great and small, in the British Isles; but in most of them the stones are quite unshaped, nor is there in any of them an example of capstones, tenons, and sockets. It is only at Avebury that we find stones of greater cubic content and weight than the largest at Stonehenge, and even there we have no sign of any capstone; the existing remains at Stonehenge seem, therefore, to me to be a later development of the earlier circles. But if the existing Stonehenge were nearly the last of all the circles, and were erected 1800 B.C., how is it that it was never imitated, and that the bronze and iron-using people went on for nearly 2,000 years till the Roman conquest with this great structure before them, and left us practically nothing of their own? In Egypt the fourth dynasty pyramids were the finest, but pyramid building went on till the twelfth dynasty, a period of 1,500 years or more; but Stonehenge has no imitator, no follower. It is quite unique, and I cannot understand its remaining unimitated throughout the whole Bronze Age. If, however, the earthworks and a circle or circles of unshaped stones—sarsens or bluestones, or both—were erected 1800 B.C., and if long afterwards it were resolved to reconstruct the circles in a different fashion from any other, we might find the old unshaped blocks taken down and trimmed into shape, and others brought to the spot and shaped and added to them, and the whole re-erected on a new plan; and, finally, the chips and the stones used in making them swept into the holes in which the uprights were set, just as Mr. Gowland has described them to us; and the difficulties I have suggested would be removed. But, it is said, the stones were shaped with stone tools, and that must have been done before metal was introduced. Stone, however, was used side by side with metal in Egypt down to the eighteenth dynasty, and it seems to me very likely that the inhabitants of Salisbury Plain, having great numbers of these blocks to deal with, developed a way of doing it with rough stones, and adhered to it long after metal had come into general use, because stones were not only still easier to come by, but were more effective for the purpose than the early metal tools. Again, it is said, if metal were in use, some would have been dropped and found in digging. We have an account of metal being found in the middle of Stonehenge, and it is likely that mediæval explorers—of whom there may have been many—would have taken any metal they found, and left stones, especially such as those exhibited. Further, if metal-using people might have been expected to lose something on the spot, so might stone-using people; but, though well-shaped stone tools and weapons have not been uncommon in the barrows on the plain, none have yet been found in these diggings, and there is no proof as yet of the period of erection or re-erection. I venture to submit, therefore,

that the reconstruction hypothesis—though, of course, it is only a hypothesis—is by no means disproved, but does fit all facts known at present better than any other, besides having a semi-historical basis.

I hope Mr. Gowland will be able to superintend the setting up of the trilithon which fell in 1797, of the stones that fell last year, and perhaps some others; and that in doing so he may obtain further evidence. I would also suggest that search be made for the holes in which the stones required to complete the south-western part of the outer circle stood, in order to ascertain whether it ever was completed, and that sections be cut across the ditches and trenches to ascertain their original depth and profile, and to see whether the silting up is as great as might be expected in the 3,700 years which are now supposed to have elapsed since they were made.

Mr. C. H. READ confessed that the view of the use and purpose of Stonehenge expressed by Mr. Evans was in accordance with the ideas he had himself always held, and that he preferred rather to wait for further evidence before changing them. With regard to the date of Stonehenge, he thought it more probable that the full evidence, when it became available, would show that bronze was known as a metal at the time; but it was obviously bold, and perhaps unwise, for anyone at this stage to attempt any great precision in the matter. He thought, however, that the recent exploration of the circle at Arbor Low had a bearing on this point, for there a barrow of the early Bronze Age stood on the *vallum*. This barrow clearly does not form part of the plan of the greater monument, but intersects and interferes with the completeness of the *vallum*. It must, therefore, have either existed before Arbor Low was constructed or have been placed there afterwards. It can scarcely be contemporary. A consideration of the possibilities appeared to Mr. Read to point to the latter as being the more likely, and in that case the great circle would be earlier than the barrow. Thus, assuming an analogy between Stonehenge and Arbor Low, the evidence furnished by Arbor Low rather bore out Mr. Gowland's contention for the Neolithic period for the date of Stonehenge, than Mr. Evans' attribution to the end of the Bronze Age.

Mr. C. W. CUNNINGTON said that, while Mr. Gowland's paper taught us much hitherto unknown as to the manner in which the large trilithons were erected, and the quantities of chips of the stones proved more conclusively what was already known—*i.e.*, that the stones were trimmed on the spot—nevertheless these excavations were too limited in extent to justify a conclusion as to the date of the structure, for it was still quite possible that a find of bronze implements—and even Roman coins—at Stonehenge would completely upset the conclusions of Mr. Gowland as to its builders. He suggested that the stone "mauls" might have been used as rollers.

Mr. GOWLAND, in reply, said that his opinion that the date of Stonehenge should be referred to the latter part of the Neolithic or the early part of the Bronze Age—that transitional period when bronze was known, but had not passed into common practical use—was based on the total absence of any bronze implements in the excavations. The use of deer's horn picks for the very extensive excavations of the hard chalk rock around the base of the leaning-stone also gave, he thought, some support to this contention.

The incrustation on the piece of stone in excavation V. merely proved that bronze was known and did not prove that bronze tools were then in common use. It contained no oxide of copper, an indication that the soil was favourable for the preservation of the metal. Its amount and nature were such that it could only have been the result of contact with a very small piece, possibly an ornament, but not with a tool of bronze.

The low mounds mentioned by Mr. Evans are, it is self-evident, later than the *vallum*.

Mr. Evans' reasoning as to the structural features of Stonehenge and its evolution from a chambered tumulus is ingenious, but if the same reasoning be applied to several Greek and Egyptian temples they also must have had the same origin, a view which cannot be reasonably entertained.

Stonehenge and dolmens or the chamber of some tumuli are of megalithic structure and of east orientation, and that is all they have in common. And as regards the last, he held that it is in the highest degree probable, if not absolutely certain, that the orientation of the dolmens and chambered tumuli was based on the tenets of the prevailing religious cult, and hence followed the orientation of the temple of that cult, and that the orientation of the temple did not originate in that of the dolmen. As to that cult in the case of Stonehenge, it is impossible to disassociate it from some form of sun worship, adoration, or observation. The horseshoe arrangement of the trilithons and of the inner bluestones opening to the east and the direction of the avenue towards the rising sun at midsummer cannot, he thought, be regarded in any other light than as pointing to the sun as the chief and not a subsidiary element in the cult for which the monument was designed.

As regards its sepulchral character, only future excavations would enable him to say whether it has been used as a place for burial or not, and at what time it was so used. Until these excavations are made and we have definite evidence that the burial or burials, if any, were made at the time the structure was erected, he should continue to hold that it was a temple or sacred place dedicated to ceremonies in which the solar element was predominant. The mere finding of a "thurible" recorded by Inigo Jones was not evidence of any value as to the original use of the structure, as the conditions under which it was found are not stated. If it belonged to a burial it may have been one of much later date than Stonehenge itself. In this connection he might say that he had dug up a modern preserved meat tin at a considerably lower depth than the flint implements in the same excavation, but it occurred at the bottom of one of the rabbit burrows, of which there are many within the circles.

That the trilithon is by no means always a sepulchral structure there was abundant evidence in eastern Asia, especially in Japan, where its representative in wood is of very ancient date. There it has never been used except in connection with religious ceremonies, or to mark the direction of some point of veneration. As to the reconstruction of Stonehenge as suggested by Mr. Lewis, not a particle of evidence has been brought forward by him. He (Mr. Gowland) might say, however, that the chippings found in his excavations proved conclusively that the sarsens were not shaped near the structure, so that the stones of the trilithons and outer circle cannot have been taken down and trimmed as Mr. Lewis suggests. As regards the placing of the lintels on the uprights the operation was much easier than erecting the uprights themselves.

The absence of similar structures in imitation of Stonehenge is in favour of the view that it was a place or temple of special sanctity. Thus in Japan there is one great temple dedicated to the Sun Goddess, which is unique in its sacred character, so much so that every Japanese, not excluding the emperor, makes at least one pilgrimage to it during his life.

Then as to the metals to which Mr. Lewis alludes as having been discovered in the middle of Stonehenge, he found enumerated in the records iron armour and a barbed iron arrow-head. Now, no one could attribute these to the date of the erection of the monument. There is no record of any find of bronze.

As regards another point, he might say that the layers of the excavations in which the flint and stone tools were found were absolutely undisturbed ground and had not been dug down to before, these tools are hence not the refuse left by previous explorers. As to the use of stone implements in the Bronze Age he had fully stated in his paper that if the Bronze Age people had found such tools to be suitable for dressing the stone they would certainly have used them.

Mr. Cunnington's suggestion that the stone mauls were used as rollers is astounding; he cannot have looked at them carefully, or he would have seen that their flat sides precludes such use altogether. Finally, he (Mr. Gowland) might say that the date

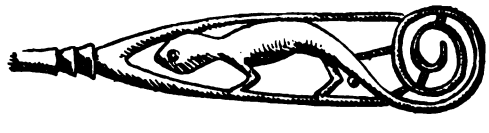
1800–2000 B.C. is given in his paper only as an approximation based solely on his excavations and subject to revision from any data which his future diggings might yield. And as regards this approximate date, and the origin and purpose of Stonehenge, he should continue to hold the opinions he had expressed in his paper until they were disproved by future discoveries. No one would then be more ready than he to modify or relinquish them, as all he desired was to arrive at the truth and not to bolster up any pet theories.

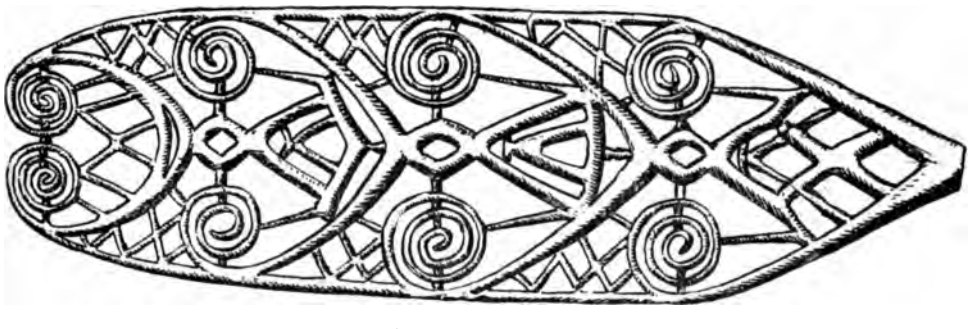
Pacific : Ornament. **Edge-Partington.**

Note on the Occurrence of Spiral Ornament in Micronesia. **17**

By J. Edge-Partington.

Some two or three years ago a collection from the Admiralty group and the islands to the west was disposed of in London. I was fortunate in procuring three lime spatulas, reproduced herewith, which I think are worth noting on account of the spiral ornament contained in their elaborately-carved handles. For some time past the origin of this particular form of ornament has been occupying the attention of ethnologists, and several notes on the subject have already appeared (*Journ. Anthr. Inst.*, Vol. XXIX., p. 305 ; Vol. XXX. (*Miscellanea*, Nos. 40, 41) ; MAN, 1901. 55). I cannot, however, agree with Professor Haddon that the scroll pattern can be derived from the Frigate bird, whose long, straight tail-feathers could hardly suggest such a design. I still adhere





to the lizard or snake idea, and this has been confirmed by a note that I have just received as to the existence in New Zealand of *water*-snakes at all events. The figures above show how easily such a scroll as that, so commonly produced by Maori carvers, might have been derived from the coiled tail of a lizard. The spatulas in my possession are closely allied to those from the Anchorite Islands figured by Dr. F. Grabowsky in the *Internationales Archiv für Ethnographie*, Vol. VII. (1894), Pl. XIV., Figs. 10, 14, and 15, but they are not so highly conventionalised. They tend to prove that the scrolls are not connected with the anthropomorphic design from which other examples figured by Dr. Grabowsky are derived, but to an independent motive of which the lizard is the original type. J. EDGE-PARTINGTON.

Léon Marillier. Hartland.

Léon Marillier. *By E. Sidney Hartland, F.S.A.*

18

The death of M. Marillier has removed one of the ablest and most learned of French anthropologists. Not France alone but science has suffered a terrible and unexpected loss. The coasts of Brittany have an evil reputation, and from time to time they remind us that their terrors have not been exaggerated. A storm one evening last summer capsized the skiff in which had embarked a joyous family party to return to Trégnier after a happy day with some friends. Nearly the whole company were drowned, and though M. Marillier himself was thrown up on the beach and was found in the morning alive, he had lost his wife and other relatives, his young sister-in-law had died at his side during the night, and the shock and the exposure and the sorrow resulted in an illness from which he never rallied. In less than two months he was laid, with the remains of those whom he had loved, to rest in the graveyard of Tréguier. Happily few storms claim a victim so brilliant, so generous, so devoted to the best interests of humanity and of science, so widely and sincerely mourned. Yet he had written no big books. His literary and scientific work was confined to essays, to the direction of important periodicals, and to his lectures in the École des Hautes Études and other educational institutions. But no one who had read his essay on *La survivance de l'âme et l'idée de justice chez les peuples non-civilisés*, his preface to the translation of Mr. Lang's *Myth Ritual and Religion* (promptly put on the *Index Expurgatorius*), or his articles on Totemism in the *Revue de l'Histoire des Religions* could fail to be struck by his learning, his acumen, and the sanity of his judgments, or to doubt that his influence must be an important power for the development of true scientific thought and enquiry, especially in his native land, though also far beyond its borders. His influence with his pupils was unbounded. His *salon* was the place where scientific and literary men, both French and foreigners, loved to assemble. An eloquent speaker, and a man of quick susceptibilities and wide sympathies, he was ever ready to travel any distance to plead for the defenceless and the suffering, to advocate the cause of temperance and the cause of peace. British anthropologists may well join their French brethren in mourning a comrade who, dying so young, has left behind a sense of loss whose magnitude is not to be measured by the work he had actually accomplished, a void that cannot easily be filled.

E. S. HARTLAND.

REVIEWS.

Mediterranean. Sergi.

Sergi's Views on the Ethnology of the Mediterranean Area.

19

The Mediterranean Race. By G. Sergi. London: Scott, 1901. 320 pp. 6*s*.

The rarity of broad constructive work in anthropology makes this a welcome book, although probably no investigator would agree with most of the conclusions. As anyone touching such questions would certainly get the book, we only give here a brief summary, and then note some of the large questions that are raised and minor corrections that may be useful to readers.

Chapter I. is a vigorous attack on Indo-Germanism, in which the southerner fights well against the view that salvation is of the Germans. Chapter II. brings forward the unity of the Mediterranean peoples. Chapter III. is the African theory, of which more below. Chapter IV. is a useful summary of the Libyans. Chapters V. to VIII. deal with Egyptians, Western Libyans, Canary Islands, Syria, and Asia Minor. Chapter IX. deals with the south of Europe. Chapter X. is on the earliest types of man in Europe; Chapter XI. on the prehistoric North-Europeans; Chapter XII. on the mixing of races; Chapter XIII. mainly on facial types of living races; Chapter XIV. on the archæology, which is not satisfactory. A number of theses are given in the preface, which greatly help the reader. These propound that the dolichocephalic pre-Aryan people of the

Mediterranean and south Europe came from Africa, that the primitive civilisation is Afro-Mediterranean, and that the savage Aryans came in as destroyers rather than as civilisers. The large questions that are raised may be briefly commented on separately.

The uniformity of type of races round the Mediterranean is assumed to prove identity of origin. But as type is the product of conditions, there is the further question as to how far the generally uniform nature of the coasts may not tend to produce a uniform type. The hilly limestone shores, with scanty vegetation, are closely alike in Spain, Italy, Greece, Syria, and Africa, and may well induce similarity of inhabitants (p. 32). We read that "there exist about a dozen cranial forms—by me termed varieties "—common alike to all the peoples called Iberian, Ligurian, the central Italic as well as "the southern and insular Italic region, the Greek peoples, Asia Minor, ancient Egypt, "and all northern Africa now occupied by the Berbers and Kabyles" (p. 36). "I am able "to assert that these characters are not found among the Celtic, Germanic, Finnic, or "other populations" (p. 38). This is a very serious assertion, and lies at the root of all Professor Sergi's work of classification. But what does it imply? Is it (1) that these dozen forms are separate strains incapable of fusion and persisting by different lines of descent? Or is it (2) that these forms are the standard deviations of one germ type; and, if so, liable to appear in rotation in a single family? Or is it (3) that these forms are reversions to different ancestral types which were long since mixed and fused? None of these conclusions will fit to all of the author's remarks; yet, if we are asked to believe in a dozen different forms all diffused over certain lands, but never found elsewhere, we should have some logical and definite theory of such a strange condition of things (p. 36).

Next, we have the African theory, that the long-headed race of early Europe came from the quaternary Sahara. But this rests on saying that it "could not have its "cradle in the basin of the Mediterranean"; though no arguments beyond vague assertions are given. The positive fact which seems to entirely preclude this theory is the southward recession of the steatopygous race. In the cave period, late palæolithic, we find this type disappearing from South France. At the early neolithic age we find it disappearing from Egypt. In 1500 B.C. it was in Somali-land. Now it is only in South Africa. Here is the continuous southward recession of a markedly different species of man, from South Europe to South Africa; associated in the earlier cases with the close of the palæolithic age, which suggests that this was the type of the vanishing palæolithic race. To bring their immediate successors up northward in the contrary direction seems quite impossible; the steatopygous race was being pushed southward by the dolichocephalic race which lined the Mediterranean basin. There is, besides, the general law that the harder life of a northern people enables them always to push southward and overcome a less robust race; an invasion from the south is very rare, and even then is not a racial movement but only a subjugation (p. 39).

A valuable remark is quoted that in Italy blonds are found over 400 m. altitude and brunettes below that. But there is nothing to show that this is the effect of altitude on a uniform race; it may be the effect of voluntary sorting of two races according to preference, or of natural selection by climate from among a mixed race (p. 73).

Some good general remarks are to be welcomed. On p. 35, "A method which is "only in appearance a method inevitably leads to errors and can produce no results," which is too true of most of the elaborate measuring of anthropologists not based on single elements of growth, and would perhaps be applied by many also to Professor Sergi's classifications of skull forms. Again, on p. 106, "Craniometry is a kind of "Kabbala and will prove anything and everything one wishes; what strange things it "will demonstrate is shown by Fouquet, who brings in Indians, Hottentots, Kaffirs, "Bushmen, and so on, in order to interpret prehistoric Egyptian skulls. It is the sense "of reality which is lost in such craniometric lucubrations." And on p. 198, "The

" numerical variation of a few units cannot constitute a difference of race; an index of " 74 is in its ethnic significance the same as one of 76 or 77, and it would be absurd " to suppose otherwise . . . We cannot accept the evidence of the cephalic index " when that evidence is contradicted by other important facts." All this will be blasphemy to the worshipper of millimetres; but it is at least a wholesome reaction against erecting an artificial system and letting that rule all conclusions.

Turning now to errors of detail, some passages (for instance, on pp. 39, 41, 53) are absurd owing to want of thought on the part of the unnamed translator, who has also left some names in Italian form. But we must question, on p. 30, the denial of modern influence from Babylonia, when we remember astronomy, sexagesimal notation, and the Psalms and other religious expression. On p. 46 the denial of ethnic value to Egyptian sculpture is certainly unjust, and is not followed by the author on p. 60. On p. 61 the date of Amenhotep IV. should be more than three centuries later than 1700 B.C. there stated. We must demur to the pyramids being called chambered tumuli (p. 71); their development is from the subterranean tomb, and not from a raised mound. On p. 80 the presence of flint tools in the Sahara proves nothing of the antiquity of the Libyan stock, and even the age of the flint work is based on sand polish which might be due to one century or a hundred centuries. The coarser forms being further south may be due to difference of material or to degradation of race in more remote regions. None of these facts will prove the southern origin of the Libyan stock and its great age. Regarding p. 92 we must say that the Egyptians never burnt the dead. On pp. 96–7 all the marks figured are ordinary Egyptian hieroglyphs, which are perfectly understood; and on p. 99 it should be noted that the sign system is entirely separate from the hieroglyphic and was already in a decadent state before the new system of hieroglyphics broke in upon it. On p. 102 the conclusion quoted about the Nagada skulls is my own, and was never stated by Thompson and Thane. On p. 278 the late bronze of Egypt is put in opposition to the early copper of Cyprus; but Egypt had copper some 5,000 years before it was supplanted by bronze. In general the last chapter on the culture and archæology is not satisfactory, and the whole remarks and examples of alphabetic signs need recasting since the fuller lists of early signs and their comparisons with Karian and Spanish alphabets have been published (*Journ. Anth. Inst.*, XXIX. 204).

The main benefit which this work may give is the sense of the uniformity of the dolichocephalic people of the Mediterranean and Europe; and the view that the Aryan may well have been a ruder race, conquering as the Dorian overcame the Mycenæan, or the Goth and Frank subdued the Greek and Roman. A fresh standpoint and a freedom from bondage to earlier suppositions is of much value, and may well give scope to genuine growth.

W. M. FLINDERS PETRIE.

Biometry. **Galton, &c.**

The Statistical Method in Biology.

Biometrika; a Journal for the Statistical Study of Biological Problems. **20**
Edited, in consultation with Francis Galton, by W. F. R. Weldon, Karl Pearson, and C. B. Davenport. Vol. I., Part I.

Physical anthropologists will give a hearty welcome to this journal, and wish the new venture a permanent success. The new statistical methods initiated by Francis Galton, and developed chiefly by Karl Pearson, have placed a most powerful means of research in the hands of students of evolution and ethnology, and promise to rescue physical anthropology from the comparatively stagnant condition in which it has remained since the time of Blumenbach and Retzius.

Biometrika, as might be inferred from its title, covers not anthropology only, but the whole field of biology. According to the editorial foreword, *Biometrika* will include (*a*) memoirs on variation, inheritance, and selection, in animals and plants, based

on the examination of statistically large numbers of specimens (including statistical investigations in anthropometry); (*b*) those developments of statistical theory which are applicable to biological problems; (*c*) numerical tables and graphical solutions tending to reduce the labour of statistical arithmetic; (*d*) abstracts of memoirs dealing with these subjects, which are published elsewhere; and (*e*) notes on current biometric work and unsolved problems. It is proposed to include memoirs written in English, German, French, and Italian.

Mr. Francis Galton leads off with a capital article on Biometry, giving a clear and concise account of the modern methods of statistics, and how they are applied to the data of biology. Since Mr. Galton calls the devotees of this science biometricians, why not call the science itself Biometrics on the analogy of mathematics, statistics, &c. ?

An interesting article by Mr. A. O. Powys, founded on anthropometric data from Australia, discusses the fertility of man and woman in relation to age, the correlation between the duration of life and the number of offspring, the stature of man between the ages of 15 and 85, and the alteration of stature with old age. By comparing data from Victoria and New South Wales it is found that the age of maximum fertility is earlier in the warmer climate, but the age at which fertility begins is earlier in the colder climate. The woman in Australia reaches her age of greatest reproductive vigour between 24–5 and 27 years, and the man at about 32 years. As regards the relation of age and number of offspring it is found that women living 60–70 years of age leave more offspring than either those who die younger or those who die older. An inference from this is that reproductive selection may tend to preserve the threescore and ten years of the Psalmist as the standard duration of life. Some interesting deductions are drawn from the analysis of the stature statistics of male and female criminals. We note that the stature of women is in most cases 7 per cent. less than men's.

The article on *The Inheritance of the Duration of Life and on the Intensity of Natural Selection in Man*, by Mary Beeton and Karl Pearson, is a fine example of the Pearson methods of analysis. The data were obtained from the pedigree records of the Society of Friends. At the conclusion of this article one of the authors says, "I think, "therefore, we can no longer talk of natural selection as an hypothesis. It is in the "case of man demonstrably at work either changing in a quantitatively definite manner "his constitution as a whole or else necessary to keep that constitution stable." Natural selection is found to be a factor in 50 to 80 per cent. of the deaths of men. The article contains elaborate investigations into the correlations of the ages-at-death of relatives, and from these formulæ are deduced by which a man can calculate his chance of life from the known ages at death of his relatives.

If we might venture to criticise Professor Karl Pearson's methods in determining these correlations, he appears to have made no effort to ascertain that the individuals with whom he was dealing belonged to the same race type. The curve set out from the statistics is invariably irregular, but a straight line found by the method of least squares is always taken to represent this curve. Now is it logical to assume that a straight line truly represents the curve if the individuals dealt with belong to different race types ? And it is a fact that even in the same families we find individuals of different race type if the ancestry is mixed. This objection appears to apply to the numerous correlations between different parts of the human body calculated by Karl Pearson and published elsewhere. He states somewhere that the frequency curve of stature usually comes out a single peaked curve agreeing very well with the theoretical curve. In our experience, frequency curves of British stature and other bodily dimensions, even when made from people living together in a limited district, have invariably two or more peaks.

There are other valuable papers in *Biometrika*, dealing with botanical and zoological statistics by Dr. Ludwig, Mr. Browne, and Professor Weldon. J. GRAY.

Museum: Driffield. **Sheppard.**

A Descriptive Catalogue of the Specimens in the Mortimer Museum of Archæology and Geology at Driffield. By Thomas Sheppard, F.G.S. (With illustrations.) 1900. 1*s.* **21**

Judging from the catalogue this museum appears to be a model country museum as its main object is the exhibition of local specimens intelligently arranged. The catalogue, which seems to be very well done, is illustrated with 38 figures. What with the general information that is given and the descriptive details it forms a valuable summary of the archæology of the East Riding. The collections have been amassed by the energy and enthusiasm and liberality of Mr. J. R. Mortimer. It is a pity that there are not more men of equal public spirit, who not only would collect but would make it a point that the collections were kept in the country, preferably in the locality from which the specimens were collected. On reading through Mr. Mortimer's notes on the history of the museum in the catalogue it is evident that many so-called collectors in the East Riding were nothing more than traders and their collections have been dispersed, probably into mostly unrecorded localities. Mr. Mortimer has opened a large number of barrows and he has carefully kept each find separate in the museum; in the catalogue, however, the barrows are described in groups, but the more important objects have their individual barrow specified. There are a large number of human skulls, "British," "Saxon," "Danish," and so forth. It would be a valuable piece of work for an anthropologist to study these remains, and Mr. Mortimer has intimated to the writer that he would be much pleased if this were done; but the specimens cannot be removed from the museum. A. C. H.

Criminal Anthropology. **Lombroso.**

Kerkerpalimpseste, Wandinschriften und Selbstbekenntnisse gefangener Verbrecher. By C. Lombroso. Hamburg: Verlagsanstalt und Druckerei A. G., 1899. 8vo, pp. xii, 318. Two plates and 20 blocks in the text. Price 7*s.* 6*d.* **22**

For the wide interest which the works of Professor Lombroso have excited there could be found no better evidence than the extent to which his books, intended originally for the student, have found acceptance among the general public. The original volume was issued some years ago, and it is a testimony to its popularity that the author and Dr. Kurella should have found it necessary to add another to the five works of Professor Lombroso already published by this firm. N. W. T.

PROCEEDINGS OF SOCIETIES.

Proceedings. **Soc. Bibl. Archæology.**

Annual Meeting, 8th January, 1902.—Professor A. H. Sayce presented a paper on *The Ionians in the Tel-el-Amarna Tablets*, in which the discovery of the name of Ionians in the tablets was defended against Dr. Kundtzon's article in *Beitr. z. Assyriologie*, iv. 3. Dr. Kundtzon maintains that in the words *Yi-i-ma-a-na a-na*, the termination of the name Yi-i-ma-a-na, which Professor Sayce identifies with Javan or Ionian, arises from a mistake made by the writer of the letter, who has written *ana*, "to," twice, the name thus reading *Yiima*, doubtless a mistake for Yima. But in an official document such a mistake is hardly probable, while the parallel passages quoted by Dr. Kundtzon rest upon conjecture. Dr. Kundtzon's criticism has thus ended only by confirming the discovery of the Ionian name in the Tel-el-Amarna tablets; *Yiu*, *Yia*, and *Yievu* which Dr. Kundtzon brought forward in support of his contention are proved to be non-existent. The only one for which there is any evidence is *Yia*, and could this be proved to have any existence it would confirm the identification of *Yivána* with "Ionian." Sargon (*Khors*, 145) speaks of the seven Cypriote kings who paid him **23**

tribute from the "land of Ya, a district of the land of Yâuana, which is seven days' "journey in the middle of the western sea." *Yâuana* represents the Greek *Ἰάονων* just as *Yavnâ* is the older form of *Ἰάϝ[ο]νες*, and *Ya'* will bear the same relation to it that *Ἰάς* bears to *Ἰάονες*. Y, or *Yod*, had at that time been lost in most Greek dialects; *Yia* would then become *Ia* (Assyrian *Ya'*). That the root of *Ἰάονες* is *Ya* is shown by the correlative *Ἰάς*, while *(v)on* is the suffix we find in *Kata(v)onia* or *Lyka-(v)onia*. *Yia*, if it exists, and Ya' would thus both alike represent the *Ἰά-ς* of Greek, while the *Ya' nagi* of Sargon would represent a Greek *Ἰάς χώρα*.

The Ionian name, it should be noted, has been detected independently by W. Max Müller in hieroglyphic records of Rameses II.

Proceedings. **Anthropological Institute.**

Special Meeting, 13th January 1902. Dr. A. C. Haddon, F.R.S., President. **24**

Mr. W. Gowland, F.S.A., read a paper on *The Recent Excavations at Stonehenge*, illustrated by lantern slides and by numerous specimens kindly lent by Sir Edmund Antrobus, Bart. The substance of the paper will be found above in MAN, 1902. 6, and the discussion which ensued in MAN, 1902. 16.

Mr. A. L. Lewis read a paper, illustrated by lantern slides, on *Stonehenge: An Enquiry respecting the Fall of the Trilithons*, which will be found printed in full in MAN, 1902 (below).

Ordinary Meeting, 21st January 1902. Dr. A. C. Haddon, F.R.S., President.

The election was announced of Mr. Hedley Visick and Dr. T. H. Bryce as Fellows of the Institute.

Mr. A. L. Lewis exhibited slides of certain *Rude Stone Monuments in Yorkshire*, which will be hereafter published in MAN, 1902 (below).

Dr. T. H. Bryce read a paper, illustrated by lantern slides and diagrams, on *A Group of Cairns with Megalithic Cists in the West of Scotland, and the Human Remains associated therewith.* Discussion: The President, Dr. Garson, Messrs. Lewis, Gray, and Ling Roth. The paper will be published in full in the *Proceedings of the Society of Antiquaries of Scotland*, and an abstract of it will be found in MAN, 1902 (below).

Annual Meeting, 28th January 1902. Dr. A. C. Haddon, F.R.S., President.

The Reports of the Council and Treasurer were presented and discussed.

The Officers and Council were duly elected for the ensuing year.

The President delivered an address on the subject, *What the United States are doing for Anthropology.* The official minutes of this meeting, with the Reports and the President's address, will be found in full in *Journ. Anthr. Inst.*, Vol. XXXII., p. 1. ff.

Proceedings. **Soc. d'Anthr. de Paris.**

Séance du 19 *décembre* 1901.—M. Fourdrignier présente le compte-rendu du Congrès de Tongres (Belgique). **25**

M. Courty rend compte des fragments de grès ayant servi à tracer des signes préhistoriques. Discussion: M. Ad. de Mortillet, Fouju, et Otgier.

M. Vauvillé offre au Musée de la Société des silex taillés ou polis de l'époque néolithique provenant de quatre communes du canton de Montfort-l'Amaury (S. & O.).

M. Volkov: Sur les représentations figurées des Scythes sur des objets trouvés en Ukraine.

M. le Dr Garnault: La Bible et le Talmud ont-ils connu et décrit la tuberculose bovine.

M. Emile Schmit: Fouilles dans la Marne et don de deux squelettes gaulois.

Printed by EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.

1. NORMA VERTICALIS.

2. NORMA LATERALIS.

3. NORMA FACIALIS.

4. NORMA BASILARIS: JAW ALONGSIDE.

SKULL OF AN ANDAMAN ISLANDER, CHANGA-LŌT-CHĒTA.

"AS CARRIED BY RELATIVES OF THE DECEASED, IN MEMORIAM."

CAMBRIDGE ETHNOLOGICAL MUSEUM, No. 45 (TEMPLE COLLECTION).

ORIGINAL ARTICLES.

Andaman Islands. With Plate C. Duckworth.

Note on the Skull of an Andaman Islander. *By W. L. Duckworth, M.A., University Lecturer in Physical Anthropology, Cambridge.* 26

The Cambridge Ethnological Museum contains the skull of an Andaman Islander which forms part of a collection of objects from the Andaman Islands, presented by Colonel Temple.

The specimen (which bears the following distinctive marks and description, "No. 45, " 'Chauga-lōt-chēta,' as carried by relatives of the deceased, in memoriam") is in fairly good preservation; the mandible is present, and this and the cranium have been smeared with red and white paint. A sling of plaited vegetable fibre is attached between the zygomatic arches and would enable the skull to be easily suspended or carried about as suggested in the foregoing description. It is not proposed to enter into a discussion of the ethnological significance of such a method of preparation of the skull, but the photographs in Plate C. show the general characters of the decoration and of the sling.

The skull is that of an adult individual, the sex not being evident, but probably male. The general aspect is cuboid, the skull being distinctly short. Fig. 1 shows the skull in *norma verticalis;* it is brachycephalic and crypto-zygous: no synostosis of sutures is observed: there is a single parietal foramen on the left side.

Fig. 2 shows the skull in *norma lateralis:* the prognathism is subnasal, and distinct, though not revealed by the alveolar index: the glabella is flattened, as are also the nasal bones; the lacrymo-ethmoidal suture is of good length (right side, 8·5 mm.; left side, 9·5 mm.): the spheno-parietal suture measures 12 mm. on each side and contains a small ossicle. The maxilla and sphenoid, meet to the exclusion of the malar bone from the boundaries of the spheno-maxilla fissure in each orbit. Infantile characteristics are denoted by the feebleness of the temporal and other muscular ridges, the small size of the mastoids, and the shallowness of the external auditory meatus. The frontal bone rises abruptly above the nasion, the bregma is the highest point of the sagittal arc, there is slight flattening at the obelion, and no protuberance or torus on the occipital bone; the skull rests on a plane surface upon the molar teeth and the opisthion.

Fig. 3 is a view of the skull in *norma facialis;* the skull wall is markedly protuberant in the pterion region, suggesting high development of the frontal lobes of the brain, and the transverse cranial arc is well rounded even posteriorly to the bregma. The nasal bones are flat, but the nasal aperture is not strikingly wide. The canine fossæ are not deep, and both malar bones undivided. On the left side there is destruction of the alveolar margin of the jaw, which is apparently the result of disease of the teeth and of alveolar abscesses.

Fig. 4 shows the skull in *norma basilaris:* a large molar tooth showing much wear remains on each side of the palate, which is small and has a blunt posterior spine. The two pterygoid plates on each side are also small and no (pterygo-spinous) foramen of Civinini is seen. The glenoid fossa is of moderate depth; the carotid canal is completely covered in, and small eustachian processes are present on each side. The styloid processes and occipital condyles are small and the foramen magnum is not pyriform. Postcondylar foramina are present on each side. In *norma occipitalis* the contour is pentagonal; several wormian bones are present on each side of the lambda.

The mandible is small and the teeth relatively large; the mandibular notch (sigmoid) is of moderate depth, and the angle of the ramus and body of the mandible exceeds 90°. The following notes refer to the teeth. The first and second molars on each side are of the normal human form and tetracuspid. The third molars are of smaller size than the preceding and have three large cusps, viz.: antero-external, antero-internal, and postero-external; while the postero-internal cusp is very small and a small accessory cusp is

seen between the antero-external and postero-external cusps and on the outer border of the crown. The dimensions of the crowns of the lower molar teeth are as follows (in every instance the antero-posterior diameter is given first, followed by the transverse diameter) :—

Right side :

First molar, 12 × 11·5 mm.	Third molar, 11 × 10·5 mm.
Second molar, 11 × 11 mm.	

Left side :

First molar, 11·5 × 11·5 mm.	Third molar, 11 × 11 mm.
Second molar, 11 × 11 mm.	

The principal dimensions of the skull itself are as follows :—

Maximum length, 159 mm.	Basi-bregmatic height, 134 mm.
Maximum breadth, 129 mm.	Horizontal circumference, 470 mm.

The chief indices are as follows :—

Cephalic index, 81·1	Kollmann's facial index, 44·7.
Height index, 84·3	Orbital index, 82·9.
Alveolar index, 102·2	Nasal index, 48·8.

In reviewing the several features which have been mentioned, there will be noticed a distinct lack of osteological characteristics denoting morphological inferiority ; there are, however, certain infantile features which have been retained to maturity. Such retention of infantile features is common among individuals of the races of small stature, among whom the Andamanese are to be placed. No argument as to the inferiority of the Andamanese skull can therefore be based on this observation.

As regards comparisons with other Andamanese crania, the present example is quite representative ; its dimensions fall within the limits of those recorded by the late Sir William Flower in his classical account of the osteology of the aborigines of the Andaman group of islands (*Journ. Anthr. Inst.*, IX.). W. L. H. DUCKWORTH.

South Africa. **Hartland.**

The Natives of South Africa: A Note on the Recent Bluebook (Cd. 904), with a Plea for Further Investigation. *By E. Sidney Hartland, Esq., President of the Folklore Society.* **27**

The Bluebook recently issued on "Legislation affecting the Natives in the Transvaal," (Cd. 904) should not be overlooked by those who are interested in the joint memorial presented by the Anthropological Institute and the Folklore Society to Her Majesty's Secretary of State for the Colonies in July 1900, praying for an inquiry into the customs, institutions, and superstitions of the Natives in our new colonies. It contains the correspondence of the Anti-Slavery Society and the Aborigines Protection Society with the Colonial Office, the proclamation amending the Liquor Law and the Labour Contract Law, a memorandum by Sir Godfrey Lagden, Commissioner for Native Affairs, and a long despatch by Lord Milner, giving the reasons for the proclamations and expounding the views of the administration upon the communications of the two societies last mentioned and on the "Native Question" generally.

It is impossible to divorce entirely the political from the scientific aspect of the "Native Question," but happily, on this matter, there is practically no party division in the ordinary sense of the phrase. The vast majority of the people of this country are agreed on the general objects of our policy with regard to the Native races. We all want to make just and reasonable laws which will enable the white and coloured races to live side by side in toleration and peace, and will provide the opportunity and the means for the gradual improvement of the condition and advance of the civilisation of the Natives. Our interest and our duty alike demonstrate the wisdom of this aim. The only question is how to attain it. The Anti-Slavery Society and the Aborigines Protection Society

start from certain premises which may or may not be correct; and they are both largely preoccupied with the fear that efforts will be made by those in charge of the great industries (mining and other) to entrap and hold in what amounts to slavery a considerable part of the "Native" population. Lord Milner's recent proclamations deal with the industrial contracts and the conditions of life of the coloured labourers while at the mines. It may be hoped that they will allay to some extent the fears of the societies, but their operation will require to be carefully watched. In any case it is obvious that they form only the first and probably a temporary instalment of a larger and vastly more important and comprehensive policy. What that policy in its details should be, the administration, represented by Lord Milner and Sir Godfrey Lagden, has not decided. The former recognises "the need of uniformity of policy in native questions" throughout South Africa, and says, "I agree with the Aborigines Protection Society that native "institutions should not be unnecessarily interfered with: that their existing system of "communal tenure and of tribal government, and their traditional customs, as far as "they are not in gross conflict with civilised ideas, should be respected; that they "should not be compelled by force or indeed by fraud to leave their own country for "service with white men; and that their taxation should be in proportion to the "services rendered and the benefits bestowed upon them by our Government. Finally, "I think, though this is not a point specially touched upon by the society, that much "more should be done for the education of the natives than has ever yet been attempted "in the Transvaal. I do not mean that they should be educated like Europeans, for "their requirements and capacities are very different, but that they should be trained to "develop their natural aptitudes for their own good and that of the community." All this is excellent as far as it goes, and in complete harmony with the best British traditions. But it must be remembered that the Native institutions vary from tribe to tribe, even where, as among the Bantu, there is a general agreement. The customs of the Bushmen differ widely, if not fundamentally, from those of the Bantu, and will be much more difficult to reconcile with civilised rule. Nothing whatever is known of the customs of the Vaalpens, a people still lower in the scale of humanity, inhabiting the northern portion of the Transvaal and believed to be the true aborigines of the country. How can these various populations be ruled according to their own institutions until their institutions are fully ascertained? It is true that Lord Milner is trying to find Native Commissioners acquainted with the native languages and customs. However admirable these men may be when they are found, it is neither advisable nor safe to allow the knowledge of Native institutions to remain recorded only in their memories and the memories of their staff. However well-intentioned, however experienced they may be, their habit of mind is different from that of the Natives. Glaring instances are not wanting in which even such men have wholly mistaken the intent and value of customs with which they were familiar.

Legislation, too, will be absolutely necessary. The iniquitous law of the Transvaal respecting Native marriages remains unrepealed and unaltered. It has a very thorny side, and amendment must be preceded by careful enquiry and consideration. The law of marriage is at the root of Native as well as civilised society. But is by no means the only subject on which a serious attempt must be made to regulate the relations of the Natives among themselves and to the dominant race. In several particulars their customs are, to use Lord Milner's words, "in gross conflict with civilised ideas." The Labour Laws (by no means disposed of in the recent proclamation), Taxation and Education are alluded to in the quotation I have just made. There is another subject, equally important, mentioned by the Anti-Slavery Society and the Aborigines Protection Society, the delimitation of reserved districts for the Native communities. The Bantu are not a decaying race. They are prolific, thoroughly acclimatised, and with well-marked capabilities of progress. Peace, prosperity, and education will result

in a rapid increase and improvement. The size of these reservations, their locality, and their capacity of responding to ever larger demands by an advancing population will have to be anxiously considered in fixing them. Nor must the future demands of the white community be forgotten. Want of foresight in one or other of these particulars has already led to trouble in Natal. The experience of the United States is likewise full of warning; and the metalliferous soil of the Transvaal and Rhodesia adds emphasis to both examples.

For all the subjects here referred to—and more might easily be added—the first requisite is exact and detailed information. Such information is only to be obtained by a formal public and detailed enquiry; and this cry for an enquiry is not a fad of scientific societies. A commission of enquiry was found to be necessary twenty years ago by the Cape Government and that of Natal. A similar enquiry extending to all the rest of British South Africa is declared to be urgent by the authors of *The Natives of South Africa*, a book here expressly approved by Lord Milner as a "collection of valuable and well-informed essays." And Sir Godfrey Lagden himself, in his memorandum of 29th November last, says: "There are many sides to the native question, "administrative and political, which it would be premature now to enlarge upon. There "is much yet to be learnt by those who are vested with the control of native affairs and "every reason why they should not be hurried." These testimonies amply justify the joint Memorial of the Anthropological Institute and the Folklore Society.

The considerations adduced above are mainly political; the direct interest of the Anthropological Institute and the Folklore Society, on the other hand, is scientific. There is no need to enlarge on that interest here. But while political and scientific interests do not always concur it may be desirable to point out that in dealing with savage races they are very often identical. If it were necessary to reinforce the arguments of special application to the problems of the Transvaal and the Orange River Colony by more general considerations we might refer to other precedents than those of Cape Colony and Natal. It is the fashion just now to regard Germany as an example in matters where practical results are to be obtained by means of scientific enquiry and experiment. The number of industries which German science has taken out of English hands during the last quarter of a century amply shows in what direction success will be found in the future. What is true of trade and manufactures is not less true of the practical business of government. Germany has already recognised this by the expenditure she has made and is making on anthropological enquiries, especially in her new territories in Africa and the Eastern Archipelago. We cannot afford to be behind her in this respect, or all the much-vaunted practical British genius for government and colonisation will not save us. The Dutch Government has for years been sensible of the importance of such investigations in her own colonies, and even beyond their borders, and has given them substantial pecuniary and other encouragement. The Government of the United States devotes yearly large sums to the investigation and record of aboriginal customs, beliefs, and institutions, and whatever illustrates aboriginal art and civilisation. South Australia, Victoria, and Queensland among the Australian States are following the same course; and lastly, the Indian Government has undertaken an ethnographical survey of the countries under its sway.

Sir Godfrey Lagden's objection to being hurried is a reasonable one, but when the Commissioner for Native Affairs himself confesses that "there is much yet to be learnt," when there is a danger of legislation being prematurely "rushed" by a half-informed public opinion, and when those who are admitted to know something on the subject demand an enquiry as "urgent," is it not time for the Anthropological Institute and the Folklore Society to follow up their joint Memorial by pressing for the promise of a commission as soon as the state of affairs in South Africa permits? E. SIDNEY HARTLAND.

Notes on the Ethnographical Collections of the Royal Museum, Peel Park, Salford. *By John L. Myres, M.A., F.S.A., Secretary of the Anthropological Institute.* 28

It is a noteworthy symptom of the growing importance which is attached to the study of Man and his works, that so many of our provincial museums have recently undertaken the rearrangement of their ethnographical collections on systematic and educational lines. And the movement is matter for congratulation from the point of view of the expert student also; for it not infrequently happens that local museums are the fortunate possessors of rare and valuable objects which have come to them in chance fashion in times past, but have been practically lost to knowledge because they failed to fit into any recognised department of exhibition-space.

Both the Committee, therefore, and the Curator of the Salford Museum have deserved well of ethnologists in respect of the recent rearrangement of the ethnological specimens under their care. They have a considerable quantity of valuable material; they have now allotted a proportionately adequate space to its display; and they have adopted a mode of arrangement which combines, in a compact series, the advantages of more than one system of classification.

The Salford Royal Museum was opened in the year 1850, and contains besides the ethnographical collection now to be described, a library, picture and sculpture gallery, and a small museum of natural history. The early date of its foundation will perhaps explain the fact that its ethnographic collection in particular contains so many specimens which have since become rare, or even impossible to procure. The more recent additions —which are numerous and important—are the outcome partly of limited expenditure on the part of the Committee, partly of donations and deposits by public-spirited neighbours. The new ethnographic gallery is 75 ft. long by 28 ft. wide, top lighted, with a double row of double-fronted cases standing free down the middle of the room, and occasional table cases and wall cases round the sides. The standing-cases are well designed and of sound workmanship—about 7 ft. high, nearly 7 ft. long, and about 4 ft. wide. Each face, therefore, forms a compartment not too large to be studied as a whole, but at the same time capable of sub-division if required. Down the middle of each case is a moveable screen, fitted with Tonk's bars and brackets, so that shelves can be used, or not, as the contents may require. A good deal more case-room could be supplied without overcrowding the gallery; and if this were done it would, perhaps, be possible to disburden some of the more crowded sections, and also to make the sections run in their proper sequence as described below, which they do not quite do at present.

The arrangement of the collection itself shows thought, and some ingenuity in making the most of what must have been, at the outset, a rather miscellaneous assemblage. At the nearer end of the room, an introductory case exhibits a representative collection of implements of flint and bone of Palæolithic Age, followed by a series of objects of Neolithic, Bronze, and Early Iron Age. The latter deserve more space and fuller treatment, if they are to serve, as seems intended, as an introduction to the ethnology and culture-history of Europe. In default of actual specimens something might easily be done with the help of casts, or even of typical photographs: the latter is a mode of filling vacancies in an educational series, which is not at all so widely used in local museums as it ought to be.

Then, coming nearer home, follows a British series of considerable interest, which illustrates the successive phases in the life-history of this country from the late Celtic and Roman periods onwards; and at this point the small and rather miscellaneous collection of Greek and Roman pottery, glass, and bronze is brought in to illustrate, even if only in its elements, that Mediterranean culture, whose advent in the north

marks the beginning of the modern European world. This, in an ethnological museum, seems only right and appropriate, but I do not remember to have seen "classical antiquities" thrown into their true setting in this fashion before.

It is curious to find, in a remote local collection, and classified rightly but vaguely as of Mediterranean origin, a very fine example of the pre-Mycenæan stage of Ægean pottery, with an incised pictograph on its surface, to which, by the courtesy of the Curator, I am permitted to give a separate note before long.

The archæological series, described above, is evidently intended to serve as a kind of general introduction to the more strictly ethnographical collection which occupies the remainder of the gallery, and at this point the inevitable question has had to be faced: "On what system should the museum be arranged?" In a large and representative collection a geographical system is, of course, essential, but anyone who has passed through the ethnographic galleries of a great national museum knows how sadly uninstructive such a grouping of material may be, and in a small museum it has the further serious drawback that its gaps are often more conspicuous than the specimens. What, for instance, is to be done with a series from Fiji, which, as at Salford, consisted originally of a spear and a hair-comb only? In a small collection equally, on the other hand, the alternative arrangement, by ethnographic types (as in the Pitt-Rivers Museum at Oxford), is liable to the same defect, and involves, moreover, a very serious burden of cross reference.

At Salford an ingenious compromise has been effected. Excluding Europe (which in its pre-civilised stages has been covered by the archæological series already mentioned), the surface of the earth has been subdivided into six main divisions, Africa, North America, South America, Polynesia, Australasia, Asia, and in these main divisions the specimens have been classified under the following ethnographic heads: Arts of Life, Arts of Pleasure, War and Chase, Spirit World and Religion, Domestic Economy, Personal Economy, and Transport and Carriage. Within these classes the sub-headings are geographical again, and refer to the minor districts into which the primary areas of the earth's surface are divided. By this arrangement the Fijian spear, for example, finds itself in company with other spears, and weapons of "war and chase" from Polynesia, while the hair-comb is found not far off among the "personal economy" of the same general region. Thus the student finds equal facilities awaiting him whether he approaches the study of ethnography from the side of geographical distribution or from an ethnological standpoint. Another advantage is that it is possible to compare the war axes, the ornaments, the pipes, or the musical instruments of one people or group of peoples with those of another, while at the same time the objects from any one portion of the world are so close together that it is possible to study the civilisation of the inhabitants of any district as a whole. That for practical purposes these half geographical, half ethnographical classes are sufficient is shown by the fact that each of the many thousands of objects comprised in the Salford collections has found a suitable place in them.

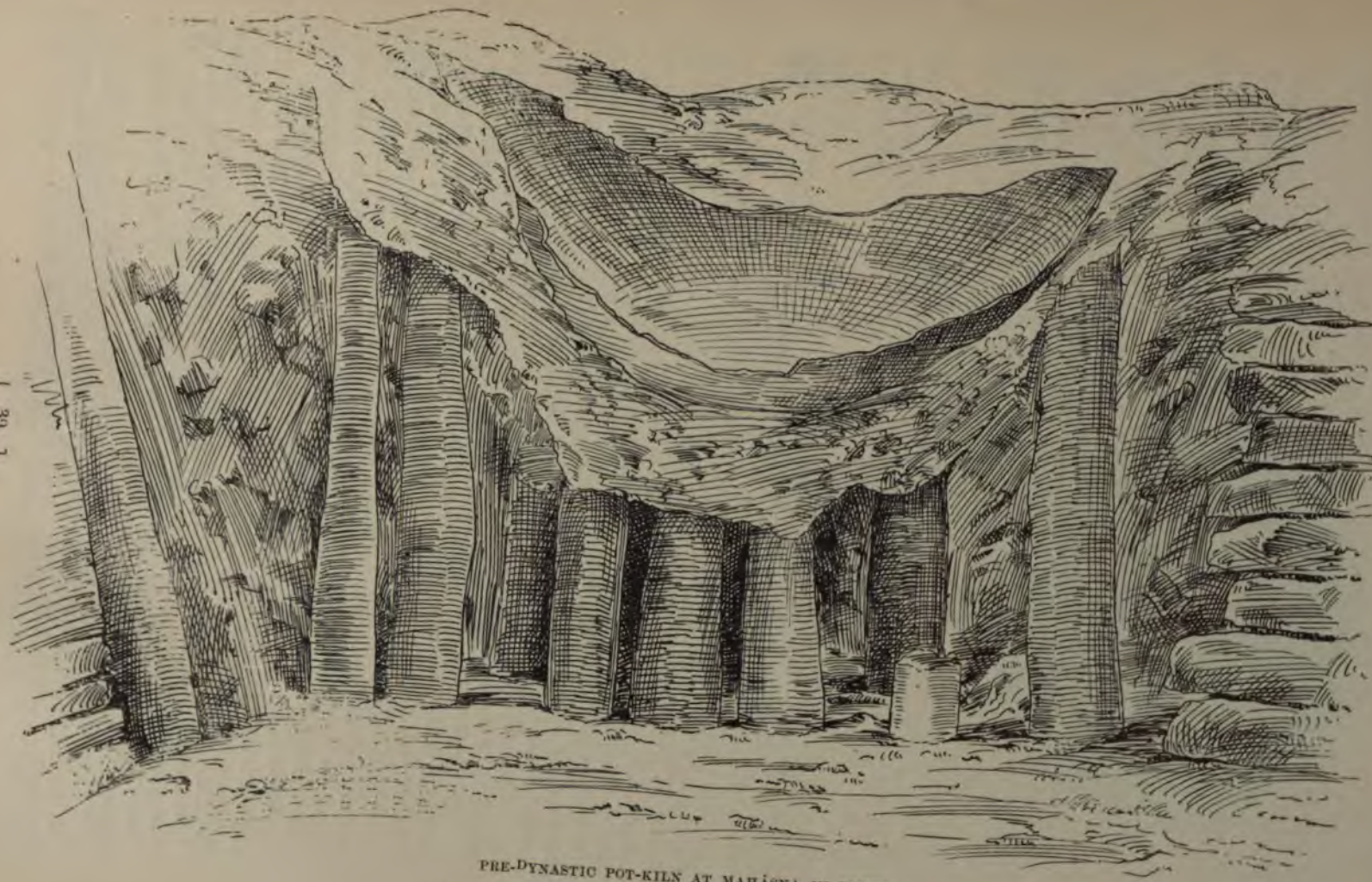
Pending publication of a catalogue of the collections in their new order, the descriptive matter contained in the old ethnographical catalogue has been utilised for the production of a series of descriptive labels, which are mounted and exhibited among the specimens.

J. L. MYRES.

Egypt. Garstang.

A Pre-dynastic Pot-kiln recently discovered at Mahâsna, in Egypt. *By John Garstang, B.A.* **29**

An interesting pottery-kiln was found in course of excavation of a pre-dynastic settlement (S. 1) at Mahâsna in the spring of this year. The excavations were made for the Egyptian Research Account, for which fund a more complete report is in



PRE-DYNASTIC POT-KILN AT MAHÁSNA IN EGYPT.

preparation ; but on account of its interest and its unique character I may be permitted to reproduce the diagram above with brief descriptive notes.

The kiln is not complete, but its essential features are preserved. A large vessel (*majûr*) is supported on firebricks of varying lengths placed vertically. Their arrangement is symmetrical, those which support the centre of the pot are about 10 inches only in height, those supporting the rim are more nearly 2 feet high, and the heights of those intervening are proportionate. The sketch shows the arrangement of these small pillars in average section.

The bricks themselves are of semicircular section with one edge roughly flattened. Similar pieces of red firebrick were found some years ago by Petrie and Quibell on pre-historic sites ; but the use of them does not seem to have been previously explained.

The kiln appears to have been surrounded at one time by a wall of firebricks, but whether it was covered over cannot be determined. In one place two or three similar kilns seem to have been grouped together. The vessel itself is separated from the mould of fireclay (which rests directly upon the pillars) by a thin layer of charred material. The fire seems to have been between the vertical pillars.

The rim of the vessel was fashioned with rectangular indentations, on the small portion of it which was preserved ; a large vessel, complete, 4 feet 6 inches in height, with similar ornamentation was found upon the site. J. GARSTANG.

Assam. Fawcett.

Note on the Recent Immigrations of Khônds and other Central Indian Tribes into the Jungle-country of Assam. *By F. Fawcett, Local Correspondent of the Anthropological Institute.* 30

The anthropologist of the future may be surprised to find that the inhabitants of the Assam jungle are unlike the peoples surrounding them. Up to within 15 years ago the Khônds of the Ganjam hills, often quoted as sacrificers of human beings, would not engage in any ordinary labour. They would not, for example, carry even the smallest article of the District Officer's luggage. Elephants were accordingly provided by Government for carriage of tents and all camp luggage. But there has come a change, due, no doubt, in the mind of the Khônd to the compulsory cessation of the sacrifice of human victims ; and within the last ten years or so the Khônds have taken to work in the ordinary way. Within the last few years, for the first time, the Khônds have been emigrating to Assam to work in the tea gardens. Accurate figures are not available, but the estimate of the best authority gives the number as somewhere about 3,000. This emigration is now stopped by edict, but it may be recommenced. Not only Khônds but the Kolarian Savaras (Savras) of the Ganjam hills, and the Gadabas (also Kolarian) of Jeypore (of Madras) have contributed to populate the Assam jungle. It is likely that many of these people have gone to stay. Hard times have, so to speak, driven them from their own country, and modern facilities of communication have rendered it easy to transfer them over several degrees of latitude to jungles other than their own. Of course they do not set out and go of their own accord. They are taken. The strange thing is that they go willingly. F. FAWCETT.

India. Rose.

Notes on the Physical Treatment of Children in the Punjab, West of the Indus. *By K. S. Haji Kalandar Khan, Rais of Madi, Dera Ismail Khan District, Punjab : Communicated by H. A. Rose, Superintendent of Ethnography.* 31

(1.) For the first 40 days the mother suckles the infant while sitting. The reason for her adopting this manner is that if she suckles the baby while lying its nose will surely be pressed by striking against her breasts and will be flattened,

(2.) In this *chilá* (*chila* or *chhila* from *chali*, meaning 40—the first 40 days from the date of birth) the women who are well up in these things dig a circular pit of the size of the infant's head. The infant is laid down on the ground with its head in the pit to flatten it, instead of doing so by pressing. This process also makes the neck longer. The reason assigned by these women against the practice of flattening the head by pressing is that this process affects the natural construction of the head and weakens the intellectual faculties.

(3.) During the first *chilá* the body of a child is rubbed with a mixture of *maidá* (fine flour) and *ghi* to make it beautiful. This gives a twofold result, as it makes the body soft and white, and is besides a sort of bodily exercise.

(4.) In this *chilá* collyrium is applied to the eyes of the baby by means of a coarse needle with a view to make them broad and large.

(5.) A compound of the following drugs is given to the infant for 40 days :— Ammaltas, two pieces. Badian (aniseed), $\frac{1}{24}$th of a *tola*. Cheese, two grains.

The drugs are saturated in water, and then warmed by placing them on a fire if it is winter, or in the sunlight if it is summer, and the mixture is given to the infant every morning and evening. The quantity of water is half a *tola*. This improves the health of the infant. The quantity of medicine stated above is considered sufficient for two doses—morning and evening. After the *chilá* the use of this mixture is totally given up.

REVIEWS.

Malta. **Mayr.**

The Prehistoric Monuments of Malta.

Die vorgeschichtlichen Denkmäler von Malta. Von Albert Mayr. Abhandlungen der k. bayerischen Akademie der Wissenschaften, I. Classe, XXI. Band, III. Abtheilung. **32**

The great stone monuments of the Maltese islands, first excavated between the years 1827–1840, have been the sport of a somewhat capricious fate. The ruins of the Gigantia in Gozo, indeed, were well described and planned by La Marmora shortly after their uncovering, but no scientific record of the excavation itself was preserved. An account of the exploration of Hagiar Kim, which was undertaken in 1839 by Mr. J. S. Vance on behalf of the British Government, appeared in *Archæologia*, but was rendered almost worthless by the incompetence of the excavator, who failed to keep any record of the most essential particulars concerning the finds. Of Mnaidra little more than Fergusson's small plan exists, and the subsequent re-explorations of the monuments by the native antiquary Caruana, though characterised by zeal and industry, were vitiated by his imperfect archæological training and overclouded by the Phœnician myth. Fergusson has the double merit of pointing out that these monuments had nothing to do with the Phœnicians and of connecting them with sepulchral usage, though he was far from realising their true antiquity.

The treatment that these monuments received in Messrs. Perrot and Chipiez' great work was unfortunately based on the Phœnician theories of the native explorer. It was even sought to find support for them by invoking parallels with the rude stone monuments of the interior of Palestine, which might themselves be thought to have equally little to do with Phœnician agencies.

The want of a really adequate account of these great primitive structures—in some respects the most striking of the Mediterranean world—has long made itself felt. This want has now been largely met by the excellent monograph of Dr. Albert Mayr on *The Prehistoric Monuments of Malta*. The work is the result of personal investigations of these structures carried out on the spot during the autumn of 1897. It contains not only a careful analysis of the buildings but a well-informed comparative study of their

leading features, and their relation to primitive monuments of Sardinia and the Balearic islands on the one side and those of the opposite African coast on the other. Nor has Dr. Mayr neglected the Sicilian parallels and the traces of early influences from the Ægean side.

To myself the results of Dr. Mayr's investigations have a special interest from the great agreement that they present with the conclusions put forth in a summary form in my monograph on *Tree and Pillar Cult*, to which I had been led by an independent investigation of these remains made by me in the spring of 1897 on my return from a journey, partly in Mr. J. L. Myres' company, through Eastern Algeria, Tunisia, and the Tripolitan interior. The Libyan parallels suggested to myself have also weight largely in Dr. Mayr's comparisons, who finds a natural link in the more tower-like sepulchral structures—the "Sesi"—of Pantelleria, which show analogies with others, such as those of Enfida on the opposite African coast. He might have added that the portals of many of the side cells in these Maltese sanctuaries show a striking resemblance to the entrances of the ancient Libyan rock-tombs such as those of Chaouach in Tunisia. The same parallel recurs in the case of the *tombe a fenestra* explored by Orsi on the opposite Sicilian coast. In the work cited I have pointed out the close analogy existing between the punctured and incised bucchero ware associated with the Maltese monuments and the similar pottery of the Sicilian tombs belonging to the second Sikel period. This comparison, which Dr. Mayr fully endorses, has considerable chronological value, since the Sikel tombs in question are distinguished by the abundance of imported Mycenæan objects and by spiral carvings which point to the imitation of Ægean models. This phenomenon again finds a parallel in the spiral reliefs found in Gigantia and Hagiar Kim. It would seem, then, that the parts of the structure with which these remains are associated belong to the Bronze Age civilisation of about the middle of the second millennium before our era. But Dr. Mayr has justly laid stress on the evidence of gradual construction presented by these monuments, and the more primitive elements of the buildings may go back to a still earlier period.

FIG. 1. CIST-LIKE RECEPTACLES, HAGIAR KIM.

In a supplement dealing with some comparisons instituted by me between the Maltese monuments and the shrines of Mycenæan pillar worship, the author, though expressing a general assent, seems to imply that I had wished to derive these western sanctuaries themselves from Ægean prototypes. Such a theory I had certainly never wished to suggest. The influence on ornament and certain details may be admitted, but the monuments themselves and the cult they represent are essentially *in situ*, and their nearer relationship must be sought

FIG. 2.
RUDE CLAY FIGURE: VALLETTA MUSEUM.

on the Libyan and Iberic sides. The resemblance to the Mycenæan shrines is to a great extent a natural result of a parallel aniconic stage of religious cult, though it is always possible that a common underlying Libyan element may be eventually found to supply the intermediate link of a more direct connexion.

Dr. Mayr lays due stress on the similarities afforded by the monument of the Iberic world, especially those of the Balearic islands. He rejects, with good reason M. Cartailhac's view as to the T-shaped stones of the Talayots, and recognises in them altars rather than supports, which he compares with the pedestals and slabs in the cells of the Maltese monuments. This view is confirmed by the parallel (which I have had elsewhere occasion to point out) between these T-shaped erections and the Bhuta stones of India. It is not clear, however, why in another place Dr. Mayr objects to my very general comparison of these buildings with the Talayots. The semi-circular recess at the entrances of the Maltese sanctuaries is here rightly compared with those outside the beehive tomb of Los Millares in Spain, the Sicilian "giants' graves," and the "Navetas" of the Balearic islands. The feature is, indeed, common to the chambered barrows of many countries. Besides the Iberic examples good parallels may be cited from Ireland and among the British long barrows, and the same sepulchral ground plan recurs in Northern Africa.

In every direction, in short, these Maltese monuments show an intimate connexion with sepulchral prototypes. The worship practised within their walls was evidently based on the cult of departed human spirits, though, by a natural evolution, the cult may have been in part at least annexed to that of higher spiritual beings. In this respect the Maltese monuments present a perfect parallelism with Stonehenge, the component features of which—avenue, stone arch, and trilith alike—may be traced back to sepulchral sources. Obviously the building has now become something more than a tomb. The cells and galleries, and to a certain extent the apses, were still covered over, but the central part of Gigantia, Mnaidra, and Hagiar Kim was clearly hypæthral.

Dr. Mayr, indeed, contends that the monuments were devoted solely to the aniconic cult, of which we have evidence in the cones, menhirs, and altars; and decides against the view to which my own investigations had led me, that parts of the structure were still used for purposes of burial. The great abundance of pottery, the accounts preserved by the peasants of discoveries of human bones, the small cist-like receptacles—a view of which, from a photograph taken by myself in Hagiar Kim, is seen in Fig. 1—all suggest the former existence of interments within the walls.

FIG. 3. CLAY FIGURE WITH GRAFFITI: VALLETTA MUSEUM.

The author quite endorses the comparisons made between the small squatting figures of stone and clay found in Hagiar Kim (absurdly known as "Kabiri") and similar figures from the prehistoric Egyptian tombs of Naqada and early Ægean deposits, the examples from which are now increased by those found in the Neolithic settlement at Knossos. To the specimens of those illustrated on Plates X. and XI. of the present work may be added a small plain clay figure in the Valletta Museum, probably also from Hagiar Kim, of which an illustration is given in Fig. 2.

Fig. 3 gives a side view from a photograph taken by me in 1897 of another female image of clay, which is very imperfectly adumbrated on Dr. Mayr's *Tafel* XI. It is much better modelled than the other, and close inspection shows a peculiarity which seems hitherto to have escaped attention. The surface, namely, of the figure is covered with a series of fine graffito markings, which on close inspection appear to be something more than mere random scratchings. There is a kind of zone about the loins with a curved and triangular figure below it, and further signs are seen upon the arms and back. It seems very probable that we have here indications of tattoo marks such as appear incised on some Ægean and Danubian images and reappear as painted decoration on others from Naqada. The usage of tattooing survived to historic times among the Thracian and Illyrian tribes, but it has been nowhere more permanent than among the Libyan stock. From the primitive race who inhabited the Nile Valley before the first Egyptian dynasties the practice seems to have been handed down without a break to the modern Berbers.

ARTHUR J. EVANS.

Indonesia. **Pleyte.**

Indonesian Art: Selected Specimens of Ancient and Modern Art and Handwork from the Dutch Indian Archipelago. By Dr. C. M. Pleyte. Folio. The Hague: Nijhoff, 1901. Parts 1 and 2. **33**

These handsome folios, which are appropriately dedicated to the Queen of the Netherlands, form the first instalments of a large publication to be issued in five parts. Each part is to consist of five plates accompanied by concise descriptions of the objects represented, and the author has decided not to burden his pages with a mass of critical notes which the serious student can without difficulty supply for himself.

The first instalment contains Plates I. to V., admirably executed in collotype, and representing objects from the islands of Java, Bali, and Borneo. The first plate reproduces a carved and gilt wooden litter from the district of Sâvan, Bali, the lotus flower forming the principal motive of the ornamentation; the litter is a remarkable specimen of elaborate wood-carving, and has been used in religious processions. The second plate gives a scene from the sixth book of the Râmâyana, representing Sugrîva endeavouring to overthrow Kumbhakarna. The original is a water-colour painting on a wooden panel, and well illustrates the peculiar conventional style of the Balinese. On the third plate are three figures of Buddha, two of bronze and one of gold, all of considerable antiquity, and found in the island of Java. Plate IV. shows us five polychromatic wooden figures from Bali, representing the god Hanuman, Garuda, the serpent Vasûki, and two effigies of lions. The latter reveal evident traces of Chinese influence, a perfectly natural fact when we consider the length of time during which the Chinese have frequented the island for commercial purposes.

On plate V. are miscellaneous objects from Borneo, comprising swords, masks, and a portable cradle. The author may be sincerely congratulated on the success of his efforts to provide a trustworthy series of illustrations of the industrial art of the Dutch Colonial possessions. Such a series was all the more needed from the fact that the Dutch National Ethnographical Museum, though very rich in specimens, loses much of its value as an educational institution through terrible overcrowding, owing to which, as the author tersely puts it, "hopeless chaos reigns." In Great Britain the book will be

doubly welcome, as the ethnography of the Asiatic archipelago is not a strong point of our museums; and the appearance of such valuable plates with descriptions in the English language should prove of the highest utility to students in this country and in the United States.

The second part contains the following plates: VI., Ancient Statuettes of Ganesa, Durga, Mahâdeva, and Vishnu, carved in volcanic stone, from Java; VII., carved teak screen, painted in colours, representing Garuda attacking Ravana, from Bali; VIII., statuettes of the five Dhyâni Buddhas, from Java; IX., two cloths inwoven with human and animal figures from Sumba, and two wooden idols from Damar; X., a Javanese water-colour drawing representing a scene from the Mahâbhârata. Each plate is accompanied by a concise description. The appearance of the remaining parts of the work will be awaited with interest. O. M. D.

Evolution of Peoples. Matteuzzi.

Les Facteurs de L'Evolution des Peuples. By Dr. A. Matteuzzi. Translated from the Italian by J. Gatti de Gamond. pp. viii—411. Paris, 1900. **34**

The author of this attractive volume is to be commended for the frankness with which he states his views on a subject which is full of contention and difficulties, and for the learning and ability with which he upholds his theory against some of the foremost exponents of seemingly established anthropological principles. These principles are not directly assailed, but rather whittled down to a residuum of truth, on which is raised a new and comprehensive superstructure which shall account for the growth and decay of nations on strictly scientific grounds. The writer tells us that he begins where his predecessors have stopped short; that the probable, enemy of all science, must be replaced by certainty induced from the observation of ascertained data covering the whole field of human activities; that a philosophy of history, based on metaphysical theories and restricting itself to the study of isolated moral phenomena, will never arrive at definite results, which can be reached only by utilising the contributions of the natural sciences, those especially of physiology and psychology. All the peoples of ancient and modern times are here passed in rapid survey, their rise and fall and diverse vicissitudes are all explained by the two essential factors of the physical environment and the heredity of acquired characters. "Les deux facteurs principaux dans l'évolution " d'un peuple sont: au commencement le milieu, plus tard l'hérédité des caractères " acquis qui fixe les variations déterminées par le milieu." So far, here is nothing, perhaps, very novel, the first of these factors being universally accepted, while the second is still *sub judice*. Only from the author's standpoint of certainty or nothing, it was necessary to take the second also as established. Indeed, heredity is practically made the key-stone of his whole system, "la clef de voûte qui relie et resserre toutes les variations déterminées par le milieu"; and we are confidently assured (without any reference to the Weissmann school) that even those characters which an organism has not inherited but only acquired during its life, combined with the legacy inherited from its ancestors, " peuvent se transmettre aux descendants."

It was also necessary, in the same way, to eliminate or diminish the force of other contributing factors, which are here regarded almost as rivals, and we are told with equal courage that the race itself counts for little in the struggle for existence or predominance with its competitors. "The race theories which assert that the psychic constitution " of a people is formed of innate elements, and refuse to admit that ancestors have " exercised any influence on their descendants, are in manifest opposition to the facts." Put in this way, the distinction between racial and inherited characters does not come out very clearly. But it is elsewhere made plain enough, and in a concluding paragraph the author writes: "Our theory breaks down those barriers that certain anthropologists,

" historians, and philosophers had raised up between the races of mankind. Toutes, " si elles sont placées dans les conditions favorables, peuvent s'élever à la civilisation." The hotly discussed question of inherent racial superiority is thus dogmatically solved by reducing all to the same level. and endowing all with the same faculty of rising in the social scale under like favourable conditions. This is not the conclusion that has been arrived at by serious students, for instance, of the full-blood Negro peoples, of the Fuegians, the Australian and Papuan aborigines.

But apart from these considerations, the book can be read with pleasure, and even profit, thanks to its earnest and genuinely honest spirit, and to the skilful way the historic and modern peoples of the world are successively reviewed, with the object of establishing the *exclusive* efficacy of two important factors in their evolution. Indeed, there would be little objection to raise against its general tenour, were it possible to strike out the italicised word in the foregoing remark. A. H. KEANE.

Chatham Island. **Weiss.**

Mehr als Fünfzig Jahre auf Chatham Island Kulturgeschichtliche und biographische Schilderungen . . . aus den Briefen eines Deutschen. **35**
Herausgegeben von Dr. Bruno Weiss. Berlin : Deutscher Kolonial-Verlag, 1901. pp. 99.

This interesting little work is largely composed of extracts from the letters of the Rev. J. C. Engst, a former missionary, who at the request of Dr. Schauinsland, the director of the Bremen Museum, wrote down what he knew of the island, its history, and its inhabitants. The anthropological part of the book is, unfortunately, very short. There are details with regard to the cannibalism of the Maoris, and the conflicts of the Morioris with their oppressors. Of the Morioris themselves an interesting custom is recorded. On a certain day in summer, when the Pleiades were plainly visible, they used to assemble ; each had a stick in his hand, on the end of which fruit of the karaka tree was fastened. This was held out towards the constellation and supplication made for the fruitfulness of the trees. In addition to the details on the religious ideas of the Morioris, which are on the whole very meagre, we have a description of their canoes, of which four kinds are briefly described, one of which was only used for ceremonial purposes to send an offering to Rongomoana, one of the gods who presided over their fishing.

Other sections deal with the " Hau Hau " religion and the present state of the island. The remainder of the book is devoted to a biography of Engst and a discussion of his views on various subjects. N. W. T.

Sociology. **Watt.**

A Study of Social Morality. By W. A. Watt, M.A., LL.B., D. Phil., Glasgow. Edinburgh : T. T. Clark. pp. xiii—293. Price 6*s*. **36**

Mr. Watt studies social morality—first, from the standpoint of virtue ; secondly, with reference to social organisation. Among the virtues he analyses justice, benevolence, truthfulness, and the rest. Under the second head he considers social groups, first generally and then under some aspects of individual life, lays down moral rules and resolutions, and discusses the wider ethical unities, and the formation of the State. He doubts the adequacy of considerations of justice to maintain the moral order, and seeks to supplement them by considerations of benevolence. There he is on dangerous ground, for benevolence is generally a mere euphemism for the laziness that will not trouble itself to ascertain what is justice. The analysis of truthfulness leads to a good deal of casuistic discussion which does not appear greatly to advance the matter. It is not by

seeking to imagine cases that may or may not arise that we arrive at a knowledge of what is truth, but by cultivating the faculty of getting at the reality of things that will enable us to deal with a wholly unexpected and uncontemplated condition of events when it does arise, as Mr. Watts states very clearly in his chapter on "Moral Rules and Resolutions." The other qualities considered are fortitude, temperance, and the rest of the self-regarding virtues. Passing to the relation of man to his fellows when organised into social groups, the author proposes to himself, keeping closely in touch with common sense, to consider some of the higher aspects of individual life, as saintliness and the desires for glory and for power. This leads to the discussion of Dr. Bosanquet's conception of the general will, and of the limitation of State interference with freedom of action and of opinion. We have to thank Mr. Watts for a thoughtful and suggestive work. He confesses that he has not altogether repressed his idealistic sympathies. E. W. B.

American Negro. **Thomas.**

The American Negro: What he was, what he is, and what he may become. A critical and practical discussion by William Hannibal Thomas. London: Macmillan & Co., 1900. pp. xxv—440. Price 7*s.* 6*d.* net. **37**

Mr. Thomas is himself a person of negro ancestry, born in Ohio, and bred in an atmosphere of aversion to human bondage. He served in the army on the side of the Northern States and lost his right arm. In 1871 he went south, and, despite strong opposition from the southern white lawyers, was admitted to the practice of the law in the courts of South Carolina in January 1874. In 1876 he was elected a member of the Legislature.

In tracing the condition of the negro from alien chattelism to decretal freedom, he is painfully impressed with the indifference of the negroes towards the agencies which consummated their freedom. He shows the great benefits the negro has derived in his passage from industrial bondage to material thrift. He is very severe, however, on those characteristic traits which distinguish the negroes from the rest of mankind, on the evils caused by the tendency to extreme emotional religion in their ethnic beliefs, on their moral lapses, and their criminal instincts. He draws a gloomy picture of the depravity of the race, which he holds to be a result of environment as well as of heredity. Their educational methods do not supply them with efficient mental training, and they are still denied, rather by customary colour-prejudice than by law, many social rights. Like all natives of the United States, they have the full status of citizenship, but their rights are to a great extent disregarded by some of the States. Hence it is admitted in all quarters that race-friction exists, and that in morals, intelligence, industry, and thrift, the freed people are not what they ought to be. Mr. Thomas hopes, however, for a national assimilation that will in time blend the heterogeneous peoples of America into a composite type which will combine the best features of all. Whether that aspiration will ever be realised may be doubted, but he is to be thanked for a candid and unsparing analysis of the weak points of a race which he has shown in his own person to be capable of rising to great distinction. E. W. B.

Folklore: Method. **Hoffmann-Krayer.**

Die Volkskunde als Wissenschaft. Von E. Hoffmann-Krayer, A.O. Professor an der Universität Basel. Zürich: F. Amberger, 1902. pp. 34. Price 1 mark. **38**

This short pamphlet, dedicated to Mr. E. S. Hartland, seeks to establish the study of Folklore on a scientific basis with the express object of rescuing it from the clutches

of the mere dilettante. It is conceived in a spirit of the greatest moderation, and the writer is to be praised hardly more for what he says than for what he does not say. He avoids the common mistake of undertaking the *à priori* delimitation of precise spheres of influence within a more or less unexplored continent. He takes things as he finds them: Ethnography ranging Negro fetishes and Lapp sledges side by side with Chinese vases and Egyptian mummies in its museums, whilst rejecting Greek statues or mediæval miniatures; and Folklore, on the other hand, confining its attention in the first instance to those elements in what may be called *our* civilisation which, from the point of view of the history of culture, are to be reckoned rather as its passive than as its active conditions. What these elements exactly are might perhaps, for the sake of clearness, have been set forth in greater detail. We may safely conclude, however, that Professor Hoffmann-Krayer finds himself in entire sympathy with the stated aims of the English Folklore Society. He proceeds to show—and here, doubtless, we reach the pith of his message to the dilettante—that there are two kinds, or rather stages, of Folklore. The descriptive branch of the science which interests itself in the customary ideas and practices of particular ethnic units or groups is, he urges, but preparatory to a comparative branch which has to determine the general laws of the origin and distribution of the phenomena selected for observation. With which dictum the serious student is not likely to quarrel. At the same time, the question may be raised whether Folklore can be expected to survive as Folklore—that is, as a specific department of inquiry distinct from ethnography as our author understands it—when it comes to formulating "laws." Surely the differentiation of home from "exotic" custom is at best but an artificial and temporary arrangement somewhat on a par with that separate treatment of the customs of ethnic units which Professor Hoffmann-Krayer assigns to the preliminary or descriptive stage of Folklore. As Plato says, Hellene and Barbarian are not "real kinds." Comparative science, meanwhile, owns to no other function than that of hypothetically constructing "real kinds"—that is, laws. Granted that there exist in Nature distinguishable areas of human characterisation presenting individual features of their own, it must surely remain the ambition of the anthropologist to explain similarities and differences alike in terms of the generic. Professor Hoffmann-Krayer, indeed, ends his paper with a protest against the mechanical assumptions which naturalism would fain introduce into ethnic psychology. The individual will, he contends, is the mainspring of variation, and custom is but the process of mutual assimilation which keeps the variant factors together in a sort of loose bundle. Such a view, however, must tell, if anything, in favour of an amalgamation of Folklore with Ethnography at the comparative level, since it limits the range of both to the unvarying and common conditions. Meanwhile was it quite judicious thus to suggest, without proceeding to explain and justify, a dualism between the passive and active conditions of man's spiritual evolution? The mere dilettante, if he be metaphysician enough to take the chance that is here offered to him, might after all make out a plausible case for dabbling in Folklore without troubling his head with "laws" at all.

R. R. MARETT.

PROCEEDINGS OF SOCIETIES.

Proceedings. **Anthropological Institute.**

Ordinary Meeting, 11th February 1902. Dr. A. C. Haddon, F.R.S., President. 39

Mr. W. W. Skeat, M.A., read a paper on *The Wild Tribes of the Malay Peninsula*, illustrated by lantern slides. The paper will be published in full in *Journ. Anthr. Inst.*, XXXII.

Printed by EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.

in his craft and undeniably a successful well-sinker. But it seemed quite natural to his mind that a main-spring, whether of water or of a watch, would be likely to deflect his forked twig in the same way. Now this is typical in the art of the divining rod and analogous instruments, from the coffin which leads the bearers of the corpse to the murderer, to the ring suspended by a thread over a glass which tells what o'clock it is.* As is well known, the European divining rod used to find not only water but mineral veins, stolen treasure, and even the thief who stole it.† The Malay instrument finds lost property and, if asked, springs of water. Now what have these various objects in common? Nothing but that the diviner wishes to find something. The divining instrument has no physical relation with water more than with stolen goods, or murderers, or the time of day; it only follows the seeker's state of mind and body. He may imagine that the instrument is giving him information, an explanation which is at its height in the Malay rattans, which are believed to be possessed by a demon and can be used to drive out other demons, and in the European divining rods, which used to be—and possibly still are—wrapped in a baby's clothes and taken to church to get them surreptitiously christened.

If it is true, as is stated, that bursars at Oxford and Cambridge employ diviners to find water on college estates, this is tantamount to saying that a man who puts himself into an abnormal nervous state by taking tight hold of a twig gains knowledge and guidance, wanting in his saner moments. If this be true, how is it that Mr. Lang, while exalting the powers of the water-finder, has not a word to say in favour of the treasure-finder or thief-finder? Is it because in the civilised world the magical thief-finder has proved an utter failure, whereas the dowser, happening to be a trained well-sinker, is more successful than if he knew nothing about springs?

E. B. TYLOR.

Britain. Gray.

British Ethnology. *Summary of paper read by J. Gray, B.Sc., before the Viking Club, March* 14, 1902. **41**

In G. Retzius' recently published work, *Crania Suecica Antiqua*, measurements are given of 107 prehistoric skulls, 44 of which are assigned to the Stone Age, 21 to the Bronze Age, and 42 to the Iron Age. It occurred to me that some additional light might be thrown on the early British races and their origin, by analysing the Swedish statistics, and comparing the results with those obtained from prehistoric British skulls, and from the living population.

The method of analysis adopted was to draw a frequency diagram from the breadths only. This usually showed several peaks or points of maximum frequency. The diagram was divided up into sections, each section having a peak at its centre, the assumption being that each peak represented a racial element in the population. The average length of the skulls in each section was then calculated, the number of skulls being too small to permit of each section being seriated according to lengths. This method I consider is much more logical than seriating according to cephalic indexes because there is no evidence that people inherit cephalic indexes from their ancestors without regard to the absolute dimensions; and the difference between the skulls of the highest and the lowest races is not so much in their cephalic indexes as in their absolute dimensions. In order to compare skulls with living heads, 8 mm. was added on to the breadth, and 10 mm. to the length to represent the thickness of the skin. These figures were obtained from measurements made in the dissecting room, and may, I think, be taken as a very good approximation. The method of adding two to the cranial index is illogical on mathematical grounds since it is easy to show by a little

* Instances in my *Primitive Culture*, Vol. I., p. 126.

† Brand, *Popular Antiquities*, Vol. III., p. 332–5. Chevreul, *La Baguette Divinatoire.*

simple algebra that, if it is correct for one particular index, it must be wrong for all other indexes.

The following table gives the result of the analysis by this method of the 107 Swedish skulls mentioned above, and also 26 longbarrow skulls which I have taken to belong to the Stone Age, and 87 skulls forming the remainder of the skulls in Tables I. and II. of the *Crania Britannica* which I have taken to belong to the Bronze Age. The table also contains measurements of living heads taken on the east coast and in the highlands of Aberdeenshire (40 miles inland).* The per-centage of the leading type in the S.W. of Ireland is taken from measurements recently made by myself.

BRITAIN AND SCANDINAVIA.

Comparative Table of Races.

	Stone Age.				Bronze Age.					Iron Age	
	I.	II	III.	IV.	III′.	IV′.	V.	VI.	VI′.	II′.	III″.
B.	149	140	150	163	150	164	145	154	156	142	152
L.	207	193	196	194	194	195	193	194	197	194	197
C.I.	72	72·5	76·5	84	77·4	84·1	75	79·5	79	73·2	77·1
Prehistoric:	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Britain	100	—	—	—	24	32	13	—	31		
Sweden	—	52	24	7	—	—	81	19	—	86	14
Living:											
Scotland, E. coast	—	—	28	14			14	44		—	—
„ Highland			12	50			2	35			
Ireland, S.W.				50							

The Roman numerals in the second line denote racial groups found by the above method in the prehistoric and living populations specified above; where the number is marked with one or two dashes it means that the typical dimensions found in that population were slightly different from those found in another population, but still were near enough to justify us in assuming that the racial elements were identical. The numbers in the third line are the average head lengths and breadths of the racial groups found as described above, the lengths being written below the breadths. The numbers in the fourth line are the cephalic indexes of the average individual obtained from the numbers in the third line. The numbers in the following lines are the per-centages which each group forms of the population.

Considering, in the first place, the living population of Aberdeenshire, we see from the table that four racial groups were found among the people on the east coast, namely, III., IV., V. and VI. When we move inland about 40 miles to the Highlands of west Aberdeenshire we find the same groups among the people but in different proportions: one group, No. IV., increases from 14 to 50 per cent., the other three groups all decrease. Now, to my mind, this shows that race No. IV. is more primitive than the others, *i.e.*, the country was inhabited by race No. IV., when races Nos. III., V. and VI. arrived on the coast. Race No. IV. was gradually pushed inward, and consequently we find it now in much smaller percentage near the coast than inland. The data given in the paper cited† show that No. IV. was a dark race and very tall (average stature about 5 feet 9 inches); race No. III. showed a decided blonde tendency and had an average stature of about 5 feet 8 inches; race No. VI. had a doubtful blonde tendency (blonde in the E. and brunette in the W.) and an average stature of 5 feet 8¼ inches.

* See *Journ. Anthr. Inst.*, Vol. XXX., p. 104, *sqq.* † *Ibid.*

These circumstances make it probable that race No. III., at least, comes from North Germany or its neighbourhood where the highest per centage of people with blonde hair is to be found; and also that race No. IV. could not possibly have come from that region. The origin of races Nos. V. and VI. is doubtful, and to determine this we have to appeal to measurements of the prehistoric races.

The Stone Age race in Britain (No. I.) is unique on account of its great length (207 mm.) and does not correspond with any other race living or prehistoric either in Britain or Sweden. In the Stone Age in Sweden we find 52 per cent. of No. II., a race not represented in Britain, and 24 per cent. of No. III., which is well represented in the living population of Britain. This confirms the conclusion about this race indicated above, and makes it almost certain that No. III. was at least one of the aboriginal blonde races of North Europe. We also find 7 per cent. of race No. IV., but, as we have concluded, from the pigmentation of this race, that it could not have been aboriginal in North Europe, the conclusion seems to be inevitable that this was a small percentage of the Bronze (or Copper) Age race of Britain that found its way into Sweden, the Stone Age in Sweden lasting to a much later date than in the British Isles. This conclusion is a curious confirmation of Montelius' opinion, that metals first reached Scandinavia from the British Isles.

A remarkable change takes place in the population of Sweden in the Bronze Age. The Stone Age types have completely disappeared and two new types appear, and, strange to say, these are the two races (Nos. V. and VI.) in the living population of Britain whose *provenance* we were looking for. In the Iron Age Sweden reverts to the Stone Age types slightly modified.

There can be little doubt, therefore, that a foreign race or races came into Sweden with the bronze culture, and also it appears highly probable that these races passed over almost completely to the British Isles before the Iron Age in Sweden. I believe it is pretty generally admitted by archæologists that bronze came into Sweden from the Danube or thereabouts. This people may have been the same race as the colonists of Hallstadt, or Professor Ridgeway's Achæans. From a considerable number of measurements I have made of persons from all parts of the British Isles, I have got the impression that No. VI. represents the predominant element in England and Scotland. No. IV. appears to be the predominant type in Gaelic-speaking districts in Scotland and Ireland, where I have found it forms about 50 per cent. of the population. It agrees more closely with Deniker's Adriatic type than any other in Europe, and the Adriatic type corresponds more closely than any other race with the distribution of dolmens in Europe. Comparing the distribution of this race in Europe with ancient tribal and place names, we find Piceni, Pictones, and Picti closely associated therewith, and also Elba (island), Albion (Britain), and Elbe (river, Germany). In the Adriatic type I think, therefore, we find the true Pictish race; and Albion, the oldest known name of Great Britain, may have been derived from another tribal name of the same race. This race probably first introduced copper and then bronze into the British Isles by the Mediterranean route. Some of these conclusions are merely speculations as yet, but the comparison of the physique of the peoples of Britain and Scandinavia given above may be of some value to ethnologists, even though some of the conclusions that have been drawn therefrom in this article may have to be modified. J. GRAY.

Malay: Languages. **Ray.**

On a Sakai Vocabulary supposed to have come from Borneo. **42**

By S. H. Ray.

Among the numerous vocabularies printed at the end of the second volume of Mr. H. Ling Roth's book on *The Natives of Sarawak** appears a list of words with

* Ling Roth, H.: *The Natives of Sarawak and British North Borneo.* Vol. II., Appendix, p. xlvi.

the heading, "A vocabulary collected by the late H. Brooke Low, Esq. The locality not specified in the MS., but Mr. Hose informs me the vocabulary is that of a dialect of a Rejang river tribe.—H. L. R."

Some time ago, when comparing the vocabularies in Mr. Ling Roth's book with those collected by myself from natives of various places in Sarawak, I found that this particular list (excepting the Malay words contained in it) agreed with no other Borneo vocabulary. The presence in it of such words as *chiap*, "bird"; *ōsh*, "fire"; *auk*, "water," suggested that it had some relationship to the dialects of the Malay Peninsula. On closer investigation I came to the conclusion that it was entirely Sakai, and had been included among the Borneo lists by some mistake. I duly noted it as a subject to be dealt with when my manuscript material on the Borneo dialects should be prepared for publication. Recently, however, a reference in P. W. Schmidt's work on the languages of the Sakai and Semang* has again brought the matter to my notice especially as Mr. Low's list is used by Schmidt as evidence of a Sakai migration to Borneo. In trying to decide this question I have specially to thank Mr. C. O. Blagden for his suggestions and for the loan of books, and Mr. Ling Roth for the use of Mr. Low's manuscript. Sir Hugh Low has also kindly aided me in my enquiries.

Mr. Brook Low's vocabulary is written in pencil on one of the printed forms issued by the Straits Branch of the Royal Asiatic Society for the purpose of obtaining information as to the languages of the Malay Archipelago. No title is given to the vocabulary, and of the 115 words in the printed lists Mr. Low has supplied the equivalents of 110.

The paper in itself affords no evidence that it came from Borneo. The sole reason for its inclusion among the Borneo vocabularies in Mr. Ling Roth's book is the fact of its being found among Mr. Low's Borneo papers.

The region from which the vocabulary really came was the basin of the Pluss river and its tributary Sungei Kerbou in Northern Perak.

An excursion up these rivers was made by M. Errington de la Croix in company with Mr. Brooke Low in January 1881, the father of the latter, Sir Hugh Low, being at that time Resident of Perak. The Sakai tribes visited were those in the "environs "of Kampong Lasah, on the River Pluss, in Kampong Tchabang on Sungei Kerbou, "one of the affluents of the River Pluss, and finally Missigit-Batu, a small village "situated at the north point of Gunong Bujang Malacca, in the valley of Kinta."† At the village (Kampong) Tchabang, on Sungei Kerbou, vocabularies were collected‡ by both travellers, and that now discussed is no doubt the one made by Mr. Low.§ That of M. de la Croix was published in the *Revue d'Ethnographie*.‖ About the same time, February 1881, M. de Saint Pol Lias visited the same district. He did not collect a vocabulary but has recorded a few words.¶ Later, in 1884, M. J. de Morgan travelled over the same ground and collected an extensive vocabulary in three dialects.**

I give overleaf Mr. Low's vocabulary in the order of the printed form, with that of de la Croix. I also add for comparison the corresponding words from de Morgan.

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* P. W. Schmidt, S. V. D.: *Die Sprachen der Sakei und Semang auf Malacca und ihr Verhältnis zu den Mon-Khmēr-Sprachen.* (Bijdr. t. d. Taal-, Land-, en Volkenkunde v. Ned.-Indië, 6e Volg., Deel VIII.) (Cf. MAN, 1902. 47.)

† Errington de la Croix, J.: *Les Sakaies de Pérak*, in *Revue d'Ethnographie.* Paris, 1882. Tome I., p. 320.

‡ *Op. cit.*, p. 326. "Leur chef, cependant, comprend le malais, ce qui nous permet de recueillir les mots les plus usuels."

§ Sir Hugh Low writes: "I quite remember my son going on an expedition up the Pluss river to "study the Sakais in the company of Mr. E. de la Croix, and I have not the least doubt that he made "a vocabulary of the language and that it must be this record which has been inadvertently printed, "as a dialect in use in Borneo."

‖ *Op. cit.*, p. 328.

¶ Brau de Saint-Pol Lias: *Perak et les Orangs-Sahèys.* Paris, 1883, pp. 270–273.

** Morgan, Jacques de: *Exploration dans la Presqu'île malais : Linguistique.* Rouen, 1886. (Extrait du Bulletin de la Société de Géographie, pp. 26–47.)

—	*Low's Vocabulary.*	*De la Croix.*	J. de Morgan.		
			Sŏman.	*Sakaye S. Raya.*	*Sakaye S. Kerbou.*
Man	sĭl	sĭl	señhoi	senhoĭ	senhoĭ, sĭl
Woman	kedol	kedol	señhoĭ-bâbô	senhoĭ-kedô	senhoi babô
Husband	tau	toh	—	—	toh
Wife	kedŏl	kedol	kŏdor	könah	kŏdol
Father	bœu	bou	bouk	abouh	bouh
Mother	œng	eung	bô	amè	bô, ŏngh
Child	kuad	kouad	kouod	—	kouad
Belly	eg	eg	—	sigh	—
Blood	lŏd	—	dara	béhim	dárâ
Body	tù	—	nség	issi	badân
Bone	tulag	—	toulák	dishañ	tolà
Ear	ngentok	—	—	ghnintók	—
Eye	mad	mad	man	monât, mât	mât
Face	kapŏ (au)	—	kâpo (joues)	kâmi	kapâ (ô et â)
Finger	jaras tig	—	tighn	konoun-tañ, darak	kâyè
Foot	jŭg	joug (pl)	djoup	tapar djon	tapar diok
Hair	soŏp	—	sôp	chôk	chô
Hand	tig (ĭ)	—	tapar-ti	tapa toñ	tapar
Head	chauog	—	kouĭ	kouĭ	pŏton
Mouth	ñaăg	—	ñiañgn	moulout	ñiak
Nail	charŏs	—	—	—	—
Nose	merh	mer	mouh	mañ	mou
Skin	gĕto	—	tck	ghótouh	gŏtô
Tongue	lantag	lanlây	löntág	löntâk	lentâh, lanlâi
Tooth	moin	moine (pl)	moiñ	kap-kâp	moiñ
Bird	chiap	tchap	tchém	tchêm	tchêp
Egg	tap	lâp	tab	pañlouñ	tab
Feather	sentŏl	—	{ seutol man = sourcils }	sentolmat = cils	—
Fish	kaă	kâh	kâ	kâ	segnouk kâ
Fowl	manok	manok	mânou	pô	manôk
Alligator	bahaia	—	—	—	—
Ant	hieb	niéb	hièb	sömout	beisch
Deer	rusa, penguin	pénguine	roussa	laka pañgâ	pañko, peñghin
Dog	chuŏ	—	tchouâ	tchouo	tchouoŏ (ô et â)
Elephant	adon	adône	adòrn	tchio	adon
Mosquito	sebeg	sebég	söbik	nâmòu	ghatâo
Pig	changgak	{ tckanga (Sanglier) }	gòr	iou, lou	tchañgheĭ
Rat	tikus	—	tikous	prô	tikous
Rhinoceros	agab	agabe	ha-ghâp	bâda	tatagash, hagâb
Snake	taju	tadjou	tâ-djou	oulâr	tadjou
Flower	bunga	—	boñgna	bouñâ	bouñâ
Fruit	buah	boua	bouó (fruit, graine)	köbouk	kôbou
Leaf	sĕlá	selâ	sölà	söla	sölâ
Root	tingtek	tengtak	—	—	teñtâk
Seed	kebeu	kebeu	—	köbouh	bidji-köbŏh
Tree	jihu	djehon	tönbo	djölop	djölop, djöhoñ
Wood	jihu	—	nöhou	djöhou	djöhou
Banana	telui	tlouĭ	töloui (bananier)	{ pissang to, pissang dje }	tölouĭ, tölouĭ djaĭ
Cocoa-nut	ñor	—	tchörô	djöho	niôr
Rice	charoĭ	tcharoye	sĭ	sassè, tchah-na	si, tchâroi
Honey	tabal	tebeul	töbol	—	—
Oil	—	—	—	—	—
Salt	empoig	empoye	mpoi	empot, tchétniêt	empoĭ
Wax	keluai	keloye	—	—	kŏloĭ
Gold	mas	mass	mâs, môs	mâs	mass
Iron	besi	besi	bössi	bössi	djouét
Silver	perak	perak	pérâ, pérô	pirâ	pérâk, pérô

—	Low's Vocabulary.		De la Croix.	J de Morgan. Sõman.	Sakaye S. Raya.	Sakaye S. Kerbou.
Tin	timah		tima	tima	tima	tima
Arrow	—		—	senloï (flèche de carbacanne)	roñ	sögal
Boat	prāhu		praoh	prāh-hou	prahou	prahou
Mat	apil		apil	pil	tchöro	apil
Paddle	—		péngayon	—	—	—
Spear	bulush		bloush	boulous	tārā	boulousch
Blow-pipe	belau		belāo	blao	bölo	blāo
Waistcloth	wōb		—	ouèg (habit, étoffe)	aban	abat
Jungle	masrok		massrop	döbri	rimbā	tālt, masrôp
Mountain	jelmol		djelmol	djelmol	gounorg	djelmol
River	tiu		téon	hoñ-hibou	sougui	tou
Sea	laut		—	laout	laout	laout
Earth	tè		téh	tèh	téh	tèh
Sky	lahu		lahou	mad-yis	lañit	balik, lahou
Sun	ish		ish	mad-yis	mat-djt	his
Moon	ghicheh ghucheh		goutché	boulan	göutchè	götchè
Star	paloy		paloye	bintāk	bintañ	pöloï
Thunder	engku		enekou	khā-reï	—	—
Lightning	—		—	—	—	—
Wind	parug		paroug	pouss	pôè	hèlhoul
Rain	ujan		oudjane	mī	mānī	houdjāt,
Fire	ösh		oû	öch	och	och
Water	auk (ork)		ohg	hoñ	toueh', rantoñ	an, ohgh
Day	jungiah		djouniate	djouniat	idjī	eshhiss
Night	laiit		lāyette	layèk	söñouï	layèk
To-day	naté		naté	his öno, naté	adji-adé	bich-dôh
To-morrow	yakal		yakal	söloupo-his (demain matin)	houpô, houpoul	siakāl
Yesterday	latab		hatob	hanou seiñ	ñtām	hatop
Alive	gosh		gosh	—	—	gôch
Dead	tebus		teboss	köbouss	—	—
Cold	d-kad		—	tchā-nūk	siñèt	dökāt
Hot	bud		houd	boukèt	bnkèt	boût, boudh
Large	menu		menou	hibou	ntôé (é très faible)	bô
Small	mishieng		meshieng	—	—	méchieñ
Male	habœu		babeu	—	senhoï xiaï	senhoï babouh
Female	babō		babo	—	—	—
Black	lengah		lenié	brteiñ	blöhen	reñxā, lóuléh
White	biorg		biok	biēg	bièk	bögièk
Come	bēï (madoh)		beï (viens !)	neptchip diéno, beï-mādô	tchibā, datañ, yèk	tchip, nabouol
Go	chīb		tchib (Va-t'en !)	nöb-tchip (partir)	djô	djô
Eat	chā		tcha	tché-tchā	tchétchā	tchetchā
Drink	imorg		imog	öck	ñout	himhoñ
Sleep	selog		slog	—	—	slogh
One	ser	né (nay)	nēy	ni	nanou	nel
Two	dua	nāl	nal	neldjoul	narr	nañrr
Three	tiga (né)	nè (sharp) neh	né	né	né	ni
Four	ampat	ampat	ampat	mpat	ampat	ampat
Five	lime	lima	—	lima	lima	lima
Six	anam	anam	—	—	—	—
Seven	tujuh	tujuh	—	—	—	—
Eight	lapan	lapan	—	—	—	—
Nine	sambilan		—	semblien	—	—
Ten	sepuloh	né-puloh	néy poulo	napoulo, nipoulo	napoulo	nelpoulo
Eleven	né-blas		néy blas	niblās	—	—

—	Low's Vocabulary.	De la Croix.	J. de Morgan.		
			Sŏman.	Sakaye S. Raya.	Sakaye S. Kerbou.
Twelve	năl-blas	nal-blas	neldjoulblas, djoulblas. nelblas	narrblâs	nafirrblas
Twenty	năl-puloh	nal-poulo	neldjoulpoulo, djoulpoulo, nélpoulo	narrpoulo	nafipoulo
Thirty	—	—	népoulo	nèpoulo	nipoulo
One hundred	saratus	seratou	ni-ratous	naratous	nelratous

De la Croix also gives four words which are not in Low's list :—

—	—	De la Croix.	J. de Morgan.		
			Sŏman.	Sakaye S. Raya.	Sakaye S. Kerbou.
Cuivre	—	tembaga	timbaga	timbagâ	timbaga
Midi	—	ou ïsh	pŏdi-his	kŏlidji	pŏdi-hiss
Treize	—	né-blas	—	—	—
Quatorze	—	ampat-blas	—	—	—

The following words (among others) are given by Brau de Sainte Pol Lias : *manô*, poule, volaille ; *beï mado*, viens ici ; *ago tchip*, ne t'en va pas ; *tchouo*, chien ; *tab*, œuf ; *tchap*, oiseau ; *ohk*, boire ; *tcha*, manger ; *djaroï*, riz en grain décortiqué ; *nèi*, un ; *nâr*, deux ; *nè*, trois ; *neiblas*, *narblas*, *nèblas*, 11, 12, 13.

The list given by de la Croix is much shorter than that of Low, and the orthography is French, but there is a very close agreement. It is also evident that the Sakaye S. Kerbou of de Morgan represents the same language. Mr. Blagden has suggested that M. de la Croix probably added to, or corrected his list from Low's. This suggestion seems to be supported by curious errors in some of the words as given by de la Croix. In Low's manuscript, in writing the letter *t*, the cross stroke is often separated from the upright and thus appears to be *l* with a horizontal stroke over the following vowel. A final *g* is often written so as to be mistaken for *y*. Hence in (apparently) copying from Low, de la Croix has written *lanlây* for *lantag*, and *lâp* for *tap*, *empoye* for *empoig* in the words for tongue, egg, and salt. In *nieb*, ant, for *hieb*, a similar error occurs. Ling Roth also printed lāp instead of tap, and when transcribing the MS. I myself at first wrote gĕl for gĕto (skin). Low also at first wrote *teh*, earth, which is the form given by de la Croix, but crossed it out and wrote *tè*. De Morgan apparently added words from de la Croix to those collected by himself. He also has *lanlâi* for tongue.

The origin of the vocabulary thus seems to be clearly made out. It must also be noted that Mr. Low would hardly have found a vocabulary in Borneo resembling Sakai without taking notice of it in some one or other of his papers.*

A few words are necessary as to the supposed migration of Sakais to Borneo referred to by P. W. Schmidt.

A tradition of the Ôrang Tûmiôr is given by Stevens,† to the effect that, owing to the attacks of an enemy who nearly exterminated them, a remnant of that tribe fled to Borneo (Nĕgri B rûnei), remained there for some time, and afterwards returned to their own country. The Ôrang Tûmiôr of Stevens are identified with the Tembe of which Clifford‡ gives a vocabulary. As the language of these differs but little from the Sakais

* Sir Hugh Low writes : "Had he (Mr. Brooke Low) met with any dialects in Borneo resembling the Sakai, I should certainly have heard of it."

† Veröffentl. d. K. Museums für Völkerk. zu Berlin, Bd. 3, p. 97.

‡ Clifford, Hugh : *Notes on some Sakai Dialects.* Journ. Straits Branch, Roy. Asiat. Soc., No. 24, p. 13.

of Low's vocabulary, P. Schmidt has regarded the latter as evidence supporting the tradition. He quotes only the numerals and has not referred to the unmistakeable Sakai character of the other words, his note on the numerals being taken (so he writes to me) at an early stage of his enquiries before going deeply into the subject of the vocabulary.

The determination of the locality from which Low's vocabulary came, of course disposes of this support of the tradition. P. Schmidt also adduces the first two numerals of Bintulu (north-west coast of Sarawak) as being in favour of the tradition. The words quoted are *ǰia*, one ; *ba*, two. P. Schmidt compares *ǰia* (= English jia) with the Sakai forms *nei*, *ni*, *neh*, &c., among which is the Tembe of Clifford, and *ba* with the Semang forms *bēh*, *bie*, &c.

In Borneo I collected a considerable vocabulary from a Bintulu native and this shows no evidence of Sakai words. The numeral for "one" was given me in the form *jia* (j as in English) which is only a variant of the usual Borneo forms *yia*, *cha* or *sa*, and the common Indonesian root. The word given me for "two" was *gwa* (which might be mistaken for *wa* or *bwa*). This is a variant of the ordinary numeral *dua*, the transition being shown by other dialects, *dua*, *duwa*, *dĕgwa*, *gwa*.

The inherent improbability of a non-maritime people like the Sakais migrating from the interior of the Peninsula, and travelling to far off Sarawak, as well as the unsupported authority of Steven's informant, also tends to negative the theory of any Sakai connection with Borneo.

SIDNEY H. RAY.

India: Microcephaly. **Fawcett.**

Note on a Microcephalic Girl in Madras. *By F. Fawcett, Local Correspondent of the Anthropological Institute.* **43**

The subject of this note is a microcephalic girl, by name Chima-bhai, aged 19 years, of the "Mahratta tailor" caste. The name of the caste given by the father was Nâm Dêo. Her physical measurements were as follows :—

Height	118·0 cm.	Left hand width	5·8 cm.
Span	122·0 „	Left foot length	18·2 „
Head length	12·6 „	„ width	6·9 „
„ width	10·3 „	Width of shoulders	29·1 „
Cephalic index	81·7 „	Bizygomatic	10·4 „
Vertex to tragus	8·9 „	Bigoniac	8·7 „
„ „	15·1 „	Maxillo-zygomatic index	83·7 „
Left hand length	12·0 „		

The girl had not attained puberty, the usual age for which is about 12 years. She exhibited in the centre of her forehead a vertical ridge leaving a depression on either side. The orbital ridges are very thick and protuberant, and the vertical ridge above mentioned joins them near the glabella. Her hair is fairly thick and cut short. In the helix of the ears, which are small, Darwin's point is not apparent. The lips are of normal thickness, and the face is prognathous and monkey-like. The girl eats as much as two ordinary men. The limbs are very strong, though slight.

She objects strongly to be touched, and is very passionate, becoming furious instantly if opposed. Her intelligence is altogether sub-human, and she is therefore unable to speak or to understand anything said to her. She is absurdly fond of getting hold of a piece of pencil and paper and scribbling on it like a small child. It is of course quite impossible to teach her to write. She came to me and by grunts and gestures got from me pencil and paper, and with evident enjoyment scribbled on the floor. Soon afterwards, on being annoyed by some trifling circumstance, she tore the paper to shreds and flung away the pencil. The mother is much attached to this semi-human daughter.

The father is a good-looking, well-made man of 5 ft. 6 in. or 5 ft. 7 in. The mother is said to be handsome. They are not related to each other.

This is their eldest child. Their second child was normal and died of small-pox.

Their third child was also microcephalic and died aged nine. He set fire to himself when alone in the house, and then ran about outside pointing to his body. He could not speak.

Their fourth child was microcephalic and more monkey-like in all his actions than the girl. He is now aged 11 and looks like an anthropoid.

Their fifth child was a girl and normal. She died in convulsions at 12 months of age.

Their sixth child is a boy and normal, now aged five.

Their seventh child is a boy and normal, now aged eight months.

F. FAWCETT.

New Guinea. Edge-Partington.

Stone-headed Clubs from the Outer Coast of British New Guinea. *By J. Edge-Partington.* **44**

Dr. Haddon, in his paper on the classification of the stone clubs of British New Guinea (*Journ. Anthr. Inst.*, Vol. XXX.; N.S. III.), figures only one specimen from the outer (N.E.) coast (Pl. XXII., Fig. 5). He mentions, however (p. 247), having seen, in addition to numerous specimens from the Mambare river, other stone clubs from the

1 2 3 4 5 6 7 8

STONE-HEADED CLUBS FROM BRITISH NEW GUINEA.

Kumusi, which is a little further south, Kome, and other localities on the N.E. coast, and that these do not differ in any essential point from those obtained from the Mambare river. Dr. Haddon says there is no difference between these club-heads and those from the Mekeo districts. In spite of that, however, I think it advisable that all the types

from the outer coast should, as far as possible, be figured so as to give an opportunity to compare them with specimens from the inner coast and other tribes. On doing this, I think that there can be little doubt that the greater number have a common origin. As far as one can judge by comparison, not only are the heads identical, but the hafting is also similar; the various forms found on the outer coast being also seen in clubs, more especially from the central and Rigo districts. Dr. Haddon says that the painting on the disc club is characteristic of the Gulf district; this, however, is a very common form of ornamentation on clubs from the outer coast. The cup-like expansion of the plaiting is also common to the outer coast and central districts (*cf.* Haddon, Pl. XX., Fig. 93, and Pl. XXII., Fig. 5). The characteristic difference is that on clubs from the former coast, in addition to the usual covering of finely-plaited cane above and below the stone heads, there is very often, not always, an ornamental band of plaited cocoanut fibre and small parrot feathers, added to which there are local ornamentations such as *cuscus* fur and strings of white feathers. The photograph above, which includes all types from the outer coast in the British Museum, gives examples of specimens from Holnicote and Dyke Acland Bays, obtained in 1895, and from Collingwood Bay, purchased last year from Mr. Abbott, a missionary who had been resident for over three years in that district, the natives of which from whom he obtained all his specimens were, so he says, hillmen, and that all the coast settlements were peopled from the hills. He informed me that most of the parrot feathers found decorating these clubs were from a species only found in the higher ranges, leading one to suppose that not only were the heads manufactured in the hills on account of the requisite stone being found there but that they were hafted there also, and that this form of weapon has found its way down both watersheds either naturally or by way of trade.

The clubs represented in the photograph are all in the British Museum, and may be described as follows:—

No. 1.—Mace-headed club, flanged. Total length, 48⅛ ins.; length of head, 3¾ ins. Mitre Rock.

No. 2.—Ovoid-headed club. Total length, 43 ins.; length of head, 3 ins. Holnicote Bay.

No. 3.—"Pine-apple" headed club. The head coloured red and white in the grooves. Total length, 4½ ins.; length of head, 3⅛ ins. Collingwood Bay.

No. 4.—Boy's club with hemispherical head. With these clubs boys were allowed to knock about the dead bodies after a battle. Total length, 41½ ins.; length of head, 3½ ins. Collingwood Bay.

No. 5.—Disc-headed club. The underside of the head is decorated with radiating red lines, the spaces between them are coloured white; the upper surface has two broad red bands crossing at right angles, the remaining parts coloured white. Length, 35¾ ins.; diameter of head, 8 ins. Collingwood Bay.

No. 6.—Ball-headed club of white stone. Length, 39½ ins.; diameter of head, 2¾ ins. Collingwood Bay.

No. 7.—Complex star-headed club. Below the usual matwork band the shaft has a square section and is carved on the four sides with sloping parallel lines. Total length, 46¼ ins.; length of head, 3 ins. Collingwood Bay.

No. 8.—Starheaded club with nine points. Total length, 45 ins.; diameter of head, 4¾ ins. Collingwood Bay.

All the above types of stone heads appear to be in common use from Mitre Point to Collingwood Bay.

J. EDGE-PARTINGTON.

India: Folklore. Rose.

The Mother's Brother: Notes and Queries on the Folklore of the Punjab (No. 25). *By H. A. Rose, Superintendent of Ethnography.* **45**

(*Cf.* MAN, 1901. 136, for *Notes on the Position of the Mother's Brother* (*Maternal Uncle*) *in Torres Strait.*)

The part played by the mother's brother in many marriage ceremonies is well known, but no explanation of the following superstition has been offered :—

1. *Hoshiarpur Account.*—A child who first teethes from its upper jaw is considered unlucky to its maternal uncle. The ceremony performed to remove the evil effects is this : the mother of the child goes beyond the limits of her village on the path leading to her parent's house. From the opposite direction comes the maternal uncle of the child bringing with him a white brass tray, one and a quarter seer of rice, seven pice, one yard of cloth, and four iron nails. All these things except the tray and the nails are knotted in the cloth. The maternal uncle drives the four nails in the ground in a square form and touches the teeth of the child with the tray, and then puts the tray and the cloth with the other articles wrapped in it within the square between the nails and goes back to his house. The uncle and his sister neither talk nor see each other's faces. The sister sits with her child clinging to her shoulder, with her veil drawn and her back towards her brother, who returns silently after performing the aforesaid ceremony, which is called *danton ka thakna*, or the charm of the teeth.

2. *Karnal Version.*—When the front teeth of upper jaw of a child of either sex happen to come out first it is a bad omen to the maternal uncle. His sister (*i.e.*, the mother of the child) sends word to him of the event. On receiving the message the maternal uncle takes a bronze cup of medium size, a quarter of a seer of *kasar* or *panjiri* (wheat flour baked in *ghi* and mixed with sugar) and half a cocoanut in a piece of red cloth (*kharwa*) and proceeds to his sister's house without informing her or any other person in the house of his arrival, which is kept strictly secret. He goes quickly on to the roof of the house in which his sisteris residing and puts the cup, &c., on it, or if there is no staircase he throws them on. After performing this ceremony he silently retraces his steps without speaking to, or seeing the face of his sister and returns home. When it is known that the ceremony has been performed the things are taken from the roof and made use of without scruple.

This ceremony is performed in a different way in those villages which are situated in the neighbourhood of Patiala. A time is fixed and a place appointed for the ceremony. The mother of the child goes to the place, which is always fixed beyond the limits of the village, on the road to her brother's house. He starts from his own village and halts a mile from the place to get information of his sister's arrival. He brings with him an old three-pie coin (*Mansuri Paisa*) with an iron nail, but nothing else. When he is informed that everything is ready he proceeds to the place. His sister takes up her child in her arms so that its face is towards the way her brother is coming, she herself standing facing the village whence she came. The brother comes silently and opens the mouth of the child, touches its teeth with the *Paisa* and iron nail, without showing himself or seeing the face of his sister, and, burying these things on the spot, returns to his village.

Any further particulars concerning this, or any similar belief, might be noted. Why should the mother's brother of all people be affected by this particular occurrence? Is his fate bound up with that of his sister's child in any other way? For his *astrological* position, *see* Sherring's *Hindu Tribes and Castes*, I., 17. H. A. ROSE.

REVIEWS.

New Guinea. **Haddon.**

The Cambridge Expedition to Torres Strait.

46

Head-Hunters—Black, White, and Brown. By Alfred C. Haddon, Sc.D., F.R.S. London: Methuen & Co., 1901. 23 × 15, pp. 426. 15*s*.

Dr. Haddon's preliminary account of the Torres Strait Expedition has the double virtue of being an entertaining popular narrative and a work of real anthropological value on the peoples of Torres Strait, New Guinea, and Sarawak.

The expedition, it will be remembered, started in 1898 for the purpose of making scientific investigations into the anthropology of the Torres Strait islanders and the adjacent population of New Guinea. The party consisted of Dr. Haddon, Dr. W. H. R. Rivers, Dr. C. S. Myers, Mr. W. McDougall, Mr. Sidney H. Ray, the late Mr. Anthony Wilkin, and Mr. C. G. Seligmann. Each member of the party had his special department, and together they formed a very strong company for the purposes in view. It is to be hoped that Mr. Wilkin's notes relating to the important subjects of house-construction, land-tenure, transfer of property, and other social data will not be lost by his untimely death last year, to which Dr. Haddon makes a kindly, sympathetic reference. Whatever adventures the travellers met with, and they were sometimes not without an element of excitement and even danger, nothing seems to have marred the harmony with which they all worked together, and contributed to the success of the expedition. The visit to Borneo was not part of the original programme, and the official report will not include the results of inquiries there. It was due to the pressing invitation of Mr. Charles Hose, the Resident of the Baram District. Some of the most interesting chapters in the book relate to this visit, and discuss the information obtained by personal inquiries and observations among the natives directly by members of the expedition, or from Mr. Hose and other British officials. The chapters on the omen-animals and the cult of skulls are of special value. The final chapter, describing an assembly of the natives at Baram to meet the Resident, and the solemn conclusion of inter-tribal peace under Mr. Hose's auspices, forms an epical climax to the narrative.

The book is profusely illustrated from photographs taken by members of the party, and by drawings and diagrams in the text which materially assist the comprehension of the descriptions of objects and ceremonies. Some of the drawings were made by natives of Torres Strait to illustrate their stories.

E. S. HARTLAND.

Malay: Language. **Schmidt.**

The Languages of the Wild Tribes of the Malay Peninsula.

47

Die Sprachen der Sakei und Semang auf Malacca und ihr Verhältnis zu den Mon-Khmēr-Sprachen. Von P. W. Schmidt, S.V.D. (Ueberdruck aus de Bijdragen tot de Taal-, Land-, en Volkenkunde von Ned.-Indië, 6e Volgr., Deel VIII.).

In this work Professor Schmidt brings together nearly all that is known at present of the languages of the wild tribes of the Malay Peninsula and then offers proofs of their relationship to those of the Mon-Khmēr group.

The first portion deals with the Word-store, Texts, Grammatical structure, and Relations of the dialects to one another. A very nearly exhaustive list of authorities is given, which shows, however, that though many have undertaken to give information about these languages, few have accomplished the task with much completeness or accuracy. In the section on Word-store the vocabulary brings together under simple Semang or Sakei stem-words, all the variants of those words. The list of distinct stem-words thus given amount (with the supplement) to 1,249. In a few cases where the differences between the words given are complicated by apparent affixes, the compiler

has supplied hypothetical stems, and in the case of compounds has indicated the other words in the list which explain them.

The Texts consist of sentences from Skeat (*Journ. Straits Branch Roy. Asiat. Soc.*, No. 30, p. 13, &c.) and Clifford (*ibid.*, No. 24, p. 13, &c.), and a story in three dialects from de Morgan (exploration). The former have a full, the latter a partial, interlinear translation.

In the Grammar the phonology is based upon the spellings adopted by the various collectors. As these have been English, French, Russian, German, and possibly also Malay, the task of the writer was not an easy one. In his discussion he has applied to the phonology the transcription system of Fr. Müller in his *Gründriss der Sprachwissenschaft* (excepting ǧ for Müller's dž), but in quoting words has wisely used the original spelling of the collectors. The word-building section is based upon a close analysis of the words in the vocabulary. An attempt is made in some cases with fair success to show that many dissyllabic words are formed with a common syllable, which, as in Chinese, &c., to some extent classifies the word.

A meaning is suggested for most of these prefixed syllables. The personal pronouns apparently fall into two groups, but the lists are very incomplete. This, of course, is to be expected in a Malay or Indo-Chinese region where true pronouns are always liable to be obscured by expressions of politeness, or by nouns used as substitutes. Demonstrative words are formed from four groups of particles. In the substantives there are no certain examples of the expression of number, gender is indicated only by a word for man or woman following, and case is only shown by position. The adjective follows the noun to which it belongs, but the numeral precedes. The numerals from 1–3 are given in most of the dialects, that for 4 in a few other, for 5 and 6 in two dialects, that for 7 in one. As arranged by Prof. Schmidt they fall into four groups.

In a note on the numerals Professor Schmidt refers to a traditional migration of Sakais to Borneo, quoting in support the Bintulu and so-called Rejang River numerals. These I have elsewhere discussed.

Material for the study of the verb was found to be very deficient. The only examples show the use of auxiliaries borrowed from the Malay to express completion, futurity, &c. The other parts of speech are not discussed, but examples are found in the vocabulary.

In the fourth section Professor Schmidt endeavours to form the dialects into related groups by discussing their affinities to each other. The lists show a diversity of vocabulary corresponding to the mixed character of the people. A list is given of 46 words which are practically the same in all the dialects. It is followed by lists of words for the equivalents of which different roots are found. These lead to the following grouping :—

Group I.—*Subdivision* 1.—Quedah Semang, Semang Ijoh and Ulu Selama, Ulu Kelantan and Patani.

Subdivision 2.—Semang (of Tomlin), Orang Bĕnua (Newbold), Juru Semang.

Group II.—*Subdivision* 1.—Besisi, Sakai S. Raya, Senoi.

Subdivision 2.—Sakai S. Kerbou, Söman (Morgan), Tembe, Perak Semang.

The author notes that nearly all the Semang vocabularies belong to the first group, and the Sakai to the latter. He describes their geographical position.

A map in this part of the work would have been a great help to the reader.

In the second part of his book Professor Schmidt discusses the relationship of the Sakai-Semang dialects to the languages of the Mon-Khmēr group. For the latter his material consists of the Mon (Peguan) Grammar and Vocabulary of Haswell, the Cambodgian Vocabularies of Moura and Aymonier, the Stieng and Bahnar Dictionaries of

Azémar and Dourisboure, the Anam Grammar of Aubaret, Vocabularies of the Wild Tribes of Cambodgia by Garner and Bastian, with Himly's notes on the Tscham.

The subject of this relationship had been to some extent worked at independently by E. Kuhn in his *Beiträge zur Sprachenkunde Hinterindiens* in 1899, and by Mr. Otto Blagden in *Early Indo-Chinese Influence in the Malay Peninsula*. Kuhn was, however, content with a mere affirmation of a relationship between the Mon-Khmēr languages and those of the Kol, Nancowry, and wild tribes of Malacca. Blagden considered the evidence insufficient to assume that the Peninsula dialects were cognate dialects to be classified in the Mon-Annam (*i.e.*, Khmēr) family.

Professor Schmidt undertakes to prove the certainty of their relationship as cognate members of the same linguistic family.

The first proof deals with the word-store of the languages. The stems which stood as the representative forms of the Sakai and Semang in the first part are here compared with the corresponding expressions in the Mon-Khmēr. The list extends to about 240, or about one-fifth of the whole Sakai-Semang vocabulary. Nouns, verbs, and adjectives occur in this list, and it includes every variety of name and occupation. The word-formation section discusses the formation of Khmēr, Stieng, Bahnar, and Mon words by means of prefixes and infixes, and then proceeds to show that the Sakai-Semang dialects use the same prefixes and infixes in the same way. The pronouns, demonstrative adverbs, and numerals, so far as they are known, are shown to have cognate forms. Professor Schmidt thus sums up his argument:—1. The phonology is similar in the two groups. 2. Word-formation follows the same principles. 3. The personal pronouns show agreements. 4. Pronouns and demonstrative adverbs are substantially the same. 5. The syntactical relations of substantives, adjectives, and verbs are the same. 6. The form and construction of the numerals are the same.

In his concluding remarks Professor Schmidt has a few anthropological notes. He quotes Thorel (*Voyage d'Exploration en Indo-Chine*) with reference to the difference between the Mon-Khmēr peoples (especially the wild races) and the Mongolian (Tibeto-Burman) and Malay races. The chief marks distinguishing the former are stated to be:—1. Dolichocephalic skull. 2. Darker skin-colour. 3. Non-oblique eyes. 4. Wavy, not straight hair. He quotes Logan and Martin with reference to the same characters of eye and hair among the Sakais, though the skull formation varies, Martin's Senoi being dolichocephalic, and his Besisi brachycephalic. The Semangs, with their still darker skin-colour and woolly hair, are anthropologically distinct from the Sakais. Professor Schmidt, however, concludes that, like the Negritos of the Philippines, they have mainly given up their own for a foreign speech, but that a few traces of the original still remain in the Semang.

Professor Schmidt's work is a valuable contribution to the study of this subject, but it shows that a great deal has yet to be done both in the way of collecting material in the languages and in the comparison of them with others. If only one-fifth of the vocabularies can be shown to be Mon-Khmēr what are the remaining four-fifths? One may be permitted to hope that Mr. Skeat's expedition to the Peninsula may provide new data, and that in discussing this, the possibility of connection with the Andaman languages or the primitive Indonesian will not be lost sight of. SIDNEY H. RAY.

PROCEEDINGS OF SOCIETIES.

Programme. International Congress of Americanists.

International Congress of Americanists: Preliminary Announcement of the Thirteenth Session to be held at New York, October 20–25, 1902. **48**

In accordance with a vote at the last session of the congress, held in Paris in 1900, the thirteenth session of the International Congress of Americanists will be held in the

halls of the American Museum of Natural History, in the city of New York, from the 20th to the 25th of October 1902.

The object of the congress is to bring together students of the archæology, ethnology, and early history of the two Americas; and, by the reading of papers and by discussions, to advance knowledge of these subjects.

All persons interested in the study of the archæology, ethnology, and early history of the two Americas may become members of the International Congress of Americanists by signifying their desire to the general secretary of the commission of organisation, Mr. M. H. Saville, American Museum of Natural History, City of New York, U.S.A., and remitting either through the general secretary or direct to the treasurer, Mr. Harlan I. Smith, at the same address, the sum of three dollars in American money. The receipt of the treasurer for this amount will entitle the holder to a card of membership, and to all official publications emanating from the thirteenth session of the congress.

Communications may be oral or written, and in French, German, Spanish, Italian, or English. The council will decide upon the time allowed for each communication. No single paper shall exceed thirty minutes in delivery. All debates are expected to be brief, and will be within limitations determined by the presiding officer of the day. All papers presented to the congress will, on the approval of the bureau, be printed in the volume of proceedings. All members of the congress are expected to send, in advance of the meeting, the titles, and if possible abstracts, of their papers to the general secretary.

The meetings of the congress will be held in the American Museum of Natural History, and every possible facility for the comfort of the members and the despatch of the work of the congress will be given by the trustees and officers of the museum. The Lecture Hall is provided with electric lanterns for the illustration of papers by slides.

The subjects to be discussed by the congress relate to :—(i.) The native races of America; their origin, distribution, history, physical characteristics, languages, inventions, customs, and religions. (ii.) The history of the early contact between America and the Old World.

The commission of organisation is constituted as follows :—President, Morris K. Jesup; vice-president, the Duke of Loubat; general secretary, M. H. Saville; treasurer, Harlan I. Smith; assisted by a strong organising committee of some forty members. The general committee will consist of the delegates representing governments and learned bodies. The bureau of the congress will be organised and the officers of the congress will be elected at a meeting of the general committee to be held at the American Museum of Natural History at 10 a.m. on Monday, October 20, 1902.

Proceedings. Anthropological Institute.

Ordinary Meeting, 11th March 1902. Dr. A. C. Haddon, F.R.S., President. **49**

The election was announced of Rev. W. Sanday, D.D., as Fellow of the Institute.

Sir William Thiselton-Dyer, K.C.M.G., F.R.S., exhibited a collection of Andamanese objects presented to the Museum, Royal Gardens, Kew, by P. Vaux, Esq.

Mr. E. Fallaize, Assistant Secretary, read a paper entitled "The Nicobar Islanders: Extracts from Diaries kept in Car Nicobar by V. Solomons, 1895–1900." Communicated by Colonel R. C. Temple, C.I.E.

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EXCAVATIONS AT REQAQNAH, UPPER EGYPT.

FIG. 1.—PART OF III.–IV. DYNASTY NECROPOLIS.

FIG. 2.—CONSTRUCTION OF ROOF 56.

FIG. 3.—TOMB 80, OFFERING-RECESS ON LEFT.

FIG. 4.—BURIAL 80, ROOF REMOVED.

FIG. 5.—MAJUR 87.

FIG. 6.—MAJUR 87, REMOVED.

FIG. 7.—BURIAL 87, LOOKING EAST.

ORIGINAL ARTICLES.

Egypt. With Plate E. Garstang.

Excavations at Reqaqnah in Upper Egypt. *By John Garstang, B.A.* 50

The excavation of a necropolis at Reqaqnah, near to Bêt Khalláf, westward from Girga, has established several new links between the earliest dynasties. In particular a portion of this site (Fig. 1, Plate E.), which was found undisturbed, provided a series and sequence in types of private burials belonging, seemingly, to the end of the Third and the beginning of the Fourth Dynasties. The date of the later tombs is fixed by two dated objects, a glazed cylinder seal of Khafra (*neteru mer*) and a stone bowl inscribed with the name of Seneferu (*suten biti*). That some of the adjoining—and, indeed, contiguous—tombs were built earlier is evident by inspection of the masonry where the joins were made; that they were not greatly anterior is seen in the similarity and mergence of the archæological forms recovered from them, chiefly pottery and stone vases.

One feature is common to all the tombs: they are enclosed by a four-walled mastaba, in the east face of which were one or two recessed panels. In some cases a rectangular enclosure was marked off with bricks, within which offering-vessels were found; in other cases the recess was more probably architectural.

In the Third Dynasty tombs the outer mastaba was an enclosing wall merely. Within was a grave at no great depth covered with a roof built like an untrimmed false arch. Similar dated tombs have been observed at El Amrah, at El Kab, and at Naga-Dêr; their range seems to have been the first three dynasties. In this site they were in all cases but one found surrounded by the wall with two panelled recesses on the east (as in the case of tomb 80 shown in Fig. 3); in this exceptional case the burial was in the corner of a wide, square pit, two metres deep. The roof (as shown in Fig. 2) was supported partly on the principle of the cantilever, with compensating weight of masonry superimposed; it was also supported by a horizontal friction, carried by the placing of each stretcher above the join of the two below, the whole resting against a wall temporary or permanent at one end and so built upon the slope, a method of construction still familiar to the natives of Nubia and the vicinity of Assuan. The burial had only one permanent feature: its head was always to the north. But the face might be east or west, the position partly or fully contracted, or almost extended (as shown in Fig. 4). In burial 72 the head rested upon a wooden headrest with fluted column. In some cases a pit was found within—more commonly outside—the closed door.

In the early tombs of the Fourth Dynasty the whole mastaba was solid, save for the shaft of a square pit descending in the centre. This was found commonly three to five metres deep, with a small recess on the south side at the bottom. The burial was generally fully contracted, head north, face east, or head west and face north, and was accompanied by a few pots. In one case (63) a recess was in the north, and contained a deposit of stone vases and table; but in this instance the burial—partly contracted—lay in the pit itself.

The slightly later series of the Fourth Dynasty also differed only slightly in detail; the retaining wall enclosed a larger area, and some space filled with rubbish intervened between it and the walls of the shaft. Some of the pits, too, were much deeper, reaching so far as seven, eight, and even nine metres.

There is another class of burial of some interest; that which is covered by a large pottery bowl or *majur*. Some instances observed at El Kab by Quibell were attributable to the Fifth Dynasty. One example from this site is shown in Figs. 5, 6, and 7. The burial is always fully contracted with head generally north-east. Several observations

help to limit the use of this form. Two tombs (with panelled mastaba walls) were found built between tombs of the Third and early Fourth Dynasty; and another case was observed in the substratum of a large mastaba probably not later than the Fifth Dynasty. It thus seems that these *majur* burials may here be dated to the Fourth and Fifth Dynasties.

This expedition was arranged for by Mr. F. Hilton Price, the funds being subscribed at his invitation by Mr. W. MacGregor, Mr. Martyn Kennard, Mr. R. Brocklebank, and Mr. Arthur J. Evans (for the Ashmolean Museum). Its object was to look for early tombs in the vicinity of the royal tombs of the Third Dynasty discovered last year at Bêt Khalláf. Work was thus done at several intervening points, but was chiefly confined to this necropolis, which proved to be extensive. The results obtained will be published in due course. In addition to the small private tombs—the character of which has been indicated—this same knoll contained some large mastabas of the Fourth Dynasty, with panelled walls (of the El Kab type), whilst in an adjoining mound were also excavated some large mastaba tombs characteristic of the Third Dynasty, in which a long stairway descends under a series of arches into the chambers deep below the surface. Some interesting stone monuments have been found, both vases and inscriptions. One further result may be mentioned, viz., that the "stairway tombs" of these early dynasties are now presented in a series, both architectural and chronological, linking the types found by MacIver at El Amrah, Petrie at Abydos, Quibell at El Kab, &c., not only with the large tombs of Bêt Khalláf (which are described in a forthcoming memoir of the Egyptain Research Account), but also with the well-known type of mastaba of the Old Kingdom, the development of which the present site illustrates in an interesting series.

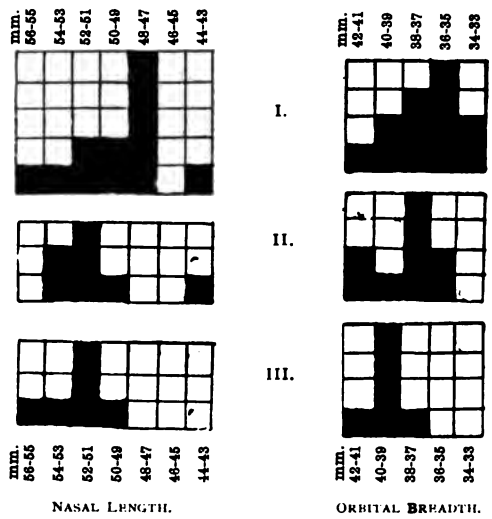
JOHN GARSTANG.

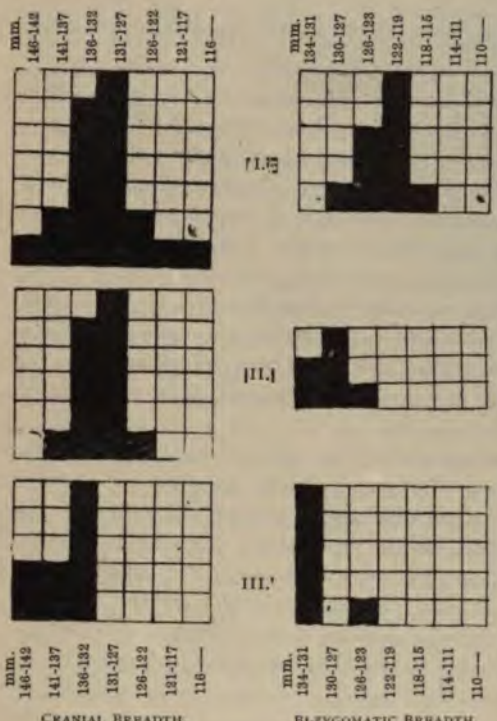
Egypt. **Myers.**

Note on the Early Dynastic Period of Egypt. *By Charles S. Myers, M.A., M.D.* **51**

In a paper on Egyptian Craniology read at the recent Glasgow meeting of the British Association (abstract in MAN, 1901. 127), I reviewed favourably Mr. Randall MacIver's suggestion that, at the dawn of the dynastic period, Egypt was invaded by a people who differed from the prehistoric population in a greater breadth of skull and length of nose. In the discussion on my paper, Professor Macalister remarked that his own unpublished measurements on the extensive collection of Egyptian crania at Cambridge entirely negatived such an opinion.

It must, however, be remembered, in the first place, that the several hundred skulls of the prehistoric period in the Cambridge Museum have been gathered together from various parts of Upper Egypt. Probably no pure race is known to us in Egypt, and it is almost certain that at all times the component ethnic elements were variously distributed in different parts of the country.





Secondly, the Cambridge collection was formed at a time when archæological data of the first three dynasties were almost unknown. The later excavations at Abydos teach us that the prehistoric passes by gradual stages into the dynastic period, and it is now possible to distinguish the culture of three periods—the early prehistoric, the late prehistoric, and the protodynastic—from one another. It is certain that skulls belonging in reality to the first or even to the second dynasty are included in the Cambridge collection of prehistoric skulls.

In order, then, satisfactorily to solve the question, we require from one and the same spot on the Nile two series of skeletons, belonging to the prehistoric and protodynastic periods respectively. Such series have been measured at Abydos by Mr. Randall-MacIver, who has recently set forth his results in tabular fashion.* From his tables I have compiled the twelve figures in the accompanying diagrams, each small square representing an individual skull, the three series, viz., (I.) the early prehistoric, (II.) the late prehistoric, and (III.) the protodynastic, being set out one below the other. They allow of a very obvious conclusion (unsafe, however, because the number of skulls is so small), that the protodynastic invaders possessed a longer nose, a wider skull, a broader face and orbit than the earlier possessors of Egypt.

C. S. MYERS.

Lycia. Cowley.

The Lycian Language. *Abstract of a Paper read by A. E. Cowley, M.A., before the Oxford Philological Society, February* 21, 1902. **52**

It is less than a century since attention was first called to this subject (by Hammer in 1811), and it was only in 1831 that the first real attempt at decipherment was made by G. F. Grotefend. Since that time much has been written, but it is rather difficult of access, as it is scattered chiefly in periodicals. A very useful bibliography is given at the beginning of the new *Corpus*, published by the Vienna Academy. What was most needed was a trustworthy collection of the material. A good deal was contained in Fellows' *Discoveries in Lycia*, and though the copies were far from satisfactory, Sharpe was able to make some really creditable progress in the decipherment, relying chiefly on the bilinguals. How little he was fitted for the work may be judged from his identification of the Lycian *lada* (*wife*) with the English "lady." However, no one had hitherto attempted a systematic investigation of the values of the letters which, after all, is the first thing needful.

After M. Schmidt published Schönborn's copies it became possible to work on something like solid ground, and the new Vienna *Corpus* seems to be as accurate as can be wished. It is now generally agreed that the alphabet is substantially the same as that of the Rhodian inscriptions, and about the majority of the letters no reasonable doubt is possible. The crucial letter is the Ψ, now transliterated as χ, not ψ as in

* *The Earliest Inhabitants of Abydos.* By D. Randall-MacIver. London: Frowde, 1901.

other alphabets. The difficulty is to settle the values of the letters peculiar to Lycian—
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The starting-point for any discussion of these must, of course, be the transcribed proper names occurring in bilinguals. Kalinka holds that they are mere modifications of similar Greek letters, and seems to be biassed in the values he assigns by this theory. We want to know first the precise values before attempting to determine the origin of the characters. Schmidt endeavoured to show that they bore a certain resemblance to Cypriote syllables. On essential points, Imbert, Hill, Thomsen, Torp, Kalinka, are in agreement, although differences in detail make it very perplexing to compare their work. With regard to the specially Lycian characters, so much is doubtful that it is probably wisest, for the present, to avoid basing any argument on forms which depend on them. Moreover, some of them are found only rarely, and knowing how mistakes occur in inscriptions, we cannot feel sure that they are not occasionally mistakes or vagaries of the stone-cutter.

The really interesting question in connexion with the subject is, What are the affinities of the race and language? From the geographical situation of Lycia, surrounded as it is by Semitic and Aryan tribes, one would expect the language to belong to one or other of those great families. Both views have been held. Saint-Martin, relying on a defective transcription, held it to be Semitic. Probably no one now holds this view. The peculiarity of Semitic languages is the rigidly triliteral character of the roots and the way in which the root appears clearly in all derived forms in a language, and is, besides, common in varying degrees to the different languages of the family. Nothing of the sort is to be found in Lycian. No trace is to be found of roots which are common to all Semitic languages, nor apparently any sign of the well-known formative principles of Semitic. It is only fair to Saint-Martin to say that his identifications with Syriac rested largely on faulty transliterations.

There is then a certain presumption in favour of regarding Lycian as a dialect belonging to some branch or other of the Indo-European family. Treating the matter, for the present, merely historically, it may be well to show the reasons which have been given in support of a view which has been held by all the most respectable authorities until recently. Grotefend and Lassen (*Z.D.M.G.*, 10.) both argued in favour of it. More recently Blau (*ib.* xvii.) compared it with Albanian. The whole question is well summed up by Frd. Müller in a review of Blau in *Orient u. Occident*, ii., 739. He points out what is obvious but often disregarded, that it is unsafe to compare Lycian with modern forms of speech. We must compare it with something as nearly as possible in the same stage of development. Blau believes Albanian to be an Iranian language. But, even if this were so, it is a corrupt and vitiated modern form, full of foreign elements, and we should require to trace it back to something like its primitive form some 2,000 years ago, for which materials do not exist. F. Müller, therefore, proposes to compare old Persian, old Bactrian, and Armenian, thus going back to Lassen's view, and proceeds to enquire whether the Lycian language can be purely Iranian. If it is, we shall expect to find the language possessing a flexional system agreeing substantially with that of contemporary Indo-European (*i.e.*, Iranian) languages, and secondly, it should exhibit the phonetic peculiarities of those languages. Of the former (flexion as in old Persian), he contends that there is no sign. Similarly with regard to the second, it is a well-known law of old Persian that initial Indo-European *s*, or medial *s* between vowels, becomes *h*, whereas there is abundant evidence that this rule does not obtain in Lycian. He thus holds that the language belongs to a class which has no feeling for case endings, otherwise it would have preserved them as Sanskrit, or in a decayed form as Greek. Considering the probable age of the inscriptions, this absence of flexion cannot be due to advanced phonetic decay, since the other languages of about the same period preserve their grammatical apparatus, and there is no reason why Lycian should

not have done the same. He therefore concludes that it is unlikely to prove Indo-European, and if it is cognate with Albanian, then Albanian must be regarded as only a distant relative of the Indo-European family. Certainly Blau's comparisons are most unconvincing. We may therefore safely reject his view, but before going on to other theories the case for Indo-European is worth considering, without, however, pledging oneself to it. The language which it is most practicable to compare with Lycian is that of the old Persian inscriptions, for many reasons. They begin with Cyrus the Great (or, rather, Darius) and end with Artaxerxes Ochus, *i.e.*, roughly speaking, their date is between 500 and 350 B.C., which is apparently about the date of the Lycian texts. They show the form of the language as it was at the time of writing, without its having suffered from corruption as would have been the case if handed down in manuscript. Moreover, they can now be read with certainty, and the careful way in which they are cut, the peculiarity of the character, their good preservation and the division of words, together leave little doubt as to the reading. On the other hand, their contents are limited and lack variety; the whole of the grammar is not represented and the vocabulary is small. Some grammatical forms can only be supplied from the analogy of the cognate languages. Still, we have plenty to go upon from the old Persian side. On the Lycian side the position is not so satisfactory. The inscriptions are numerous and the reading is, in many cases, pretty certain, but the amount of our real knowledge of the language is small. In fact, although much work has been done and very probable results obtained by Torp, Thomsen, and others, it is, perhaps, wise to accept the sober verdict of Kalinka that our real knowledge is confined to the very limited contents of the bilinguals (Lycian and Greek), although we need not follow him in thinking that what has been obtained by means of comparing passages is "hardly worth mentioning." Kalinka gives the following list of words known from the bilinguals (in *Neue Jahrbb. f. d. kl. Altertum*, 1899, p. 680) :—

ebēñnē prñnāvu	= *τουτὶ τὸ μνῆμα*	hrppi etli ehbi	= *ἑαυτῷ*
ebēñnē ñtatā	= *τοῦτο τὸ μνῆμα*	ladu	= *τὴν γυναῖκα*
ebeiya eravaziya	= *τῦ μνῆμα τόδε*	ladi	= *τῇ γυναικί*
prñnavatē	= *ἐποιήσατο, ἠργάσατο*	hrppi lada epttehe	= *ταῖς γυναιξὶν ταῖς ἑαυτῶν*
prñnavātē	= *ἠργάσαντο*	tideimi	= *υἱός*
se	= *καί*	tideime (ehbiye)	= *τοῖς τέκνοις, ἐγγόνοις*
hrppi	= *ἐπί* [for the purpose (use) of]	cbatru	= *θυγατέρα*
		tuhes	= *ἀδελφιδοῦς*
ehbi	= *ἑαυτοῦ*	tuhesñ	= *ἀδελφιδῆν*
atru ehbi	= *ἑαυτόν*	prñneziyehi	= *οἰκεῖοι*

The sum total is not very promising. To this Torp adds the following, which he holds to be the assured results of his own methods, and they are mostly sound, though on a different footing from the foregoing list :—

ne, ni	= the negative	tleiti, tlidi	= shall pay (pays)
ti	= the relative	tuvete	= dedicated
tike	= the indefinite pronoun	tebete	= smote
tibe	= or	χñtevete	= commanded
kbi	= another, a stranger	esu	= *ἔστω*
-ne	= enclitic pronoun	-ne	= infinitive termination
-iye	= dative demonstrative pronoun	-tu	= imperative termination
		epñ	= to, in addition
ade, adi	= made, makes	ēne	= father
ñtepitati	= buries (*hineinlegt*)	χahba	= son-in-law
hrppitati	= adds (*hinzulegt*)	ñtata	= grave
martti	= commands	qla	= people
piyeti, -e	= fixes, -d (*bestimmt, -te*)	trbb	= city
iyeti, -e	= fixes, -d	terñ	= army
sttati	= sets up	hrzzi	= superior
mati, sñmati	= allows	ētri	= inferior
tubeiti	= owes	hātā	= self (*ipsum*)

If we get nothing else out of this list we can, at least, reconstruct to some extent the system of declension in Lycian. Disregarding doubtful forms the *A*-noun seems to go thus in the singular :—

N. *-a* A. *-ã, -a, -u* G. *-ahe, -ah* D. *-i, -aye*

The correctness of this scheme is made the more probable by the fact that the *I*-nouns have precisely the same terminations, preceded by the *i* of the stem, which is sometimes changed to *e* (*ã*). If we now compare the old Persian *A*-declension, the resemblance is rather striking :—

N. *-a* A. *-am* G. *-ahyā* (*-ahya*) Loc. *-aiy*

In the accusative, *-ã* (nasalised *a*) seems a natural step between *-am* and *-a*. In the genitive there is a similar weakening from old Persian *-ahya* through *-ahe* to *-ah*. In the dative, Lycian seems to have retained the more primitive form in *aye*, from which old Persian *-a-iy* is a weakening, while that, again, is further weakened in old Persian to *-a-y*, and in Lycian to *-i*. In the plural the Lycian forms are less certain. A nominative in *-ahi* is quoted for *A* nouns, which would agree with old Persian *-aha* (contracted, *-ā*). The accusative is in *-as*, or *-az*, while the old Persian *bagā* is for *bagah* from *bagans*. For the dative the Lycian forms seem too doubtful to compare, and the genitive has not yet been discovered. If it agrees with old Persian it should end in *-anā*, but the form does not seem to occur. In the verb we only know for certain the third singular, past indicative active (or middle) in *-ate*, *-ete*, *-atẽ*, *-etẽ*, corresponding to old Persian *-ti*, and the third plural in *ãte*, *ẽte*, *ãtẽ*, *ẽtẽ*, old Persian *-a(n)ti*.

So far, then, the relation of Lycian to old Persian seems to be close, and if we accept Torp's conclusions the points of contact may be multiplied. No doubt the argument, from grammatical forms, is one of the strongest, but it is not the only one. When we come to the vocabulary the case is very different ; for the words of which we certainly know the meaning it is very difficult to believe in Indo-European affinities. The names expressing family relations should be similar in kindred tongues. But take the common word, *tideimi* = "son," or rather "offspring." Savelsberg would connect it with *τιθήνημα*, which seems a desperate attempt. It might be connected with old Persian *tauma* = "family," but the more original form of this appears in old Bactrian, as *taokhma*. *Prῖnavatẽ* is connected by Savelsberg with *πρίω*, *πρίζω*, "to saw," *lada*, with the root of *λῆμα*, &c. No one has been yet found to provide an Indo-European root for *cbatru* = *θυγατέρα*.

Pauli, in his work on the Lemnos Inscription, regards Lycian as certainly not Indo-European. He argues that even if the grammatical inflexion is Indo-European, the words expressing kinship, which ought to "go with" the inflexions, are not Indo-European, and further, that the inflexion itself is not Indo-European, but the resemblances are due to mere coincidence. Pauli is most learned and ingenious, but seems to be led away by his desire to connect Lycian and Etruscan by way of Lemnos, and unable to judge whether his case is proven or not. He thinks that all that is Indo-European in Lycian inflexion is the general principle of declension by suffixes, which is found also in Etruscan (he might say practically in all languages), and holds that the genitive in *-h* may be a weakening of the *ś*, *-śi*, forming genitives in Etruscan. This may be so, but the one assumption is as good as the other, except that we know the Indo-European forms, while Pauli's Etruscan genitive still requires further proof. The whole grammatical system of Lycian may, indeed, turn out to be not Indo-European when we know more about it, but the above view is not controverted by one doubtful comparison. A great deal more evidence must be collected before we either accept or deny positively the Indo-European character of the grammar. However, the popular view at present, held by Pauli, Kretschmer, Imbert, and Arkwright, is that Lycian is not Indo-European. It was Kiepert who first drew attention to the widely-spread series of names of persons and places, ending in *-nda*, *ησσος*, and varieties of them, found

throughout Asia Minor as well as in Greece. Pauli has given lists of them, and Kretschmer improves on him and discusses them thoroughly. Pauli shows that many personal names in Lycian belong to the same root as place-names, that both again are closely related to similar Carian names, and that all go back to a pre-Hellenic language and race which he chooses to call Pelasgian. He further holds that Carian names in *-ωλλος*, which is parallel to Lycian *-αλος*, may be connected with Etruscan names in *-l*, &c., and so spreads his Pelasgians west to Italy. This clearly shows, as he thinks, a close relation between all these peoples. Without accepting all his conclusions we must admit that the names in *-nd-* are probably not Greek, and that their position shows the presence of a non-Greek population at one or at different times in Greece and Asia Minor. But this is a long way from proving that the Lycian language, as found on the monuments must belong to the same stock, because we believe it to be not Indo-European. By the same argument we might prove classical Greek to be not Indo-European because it was spoken at Korinthos and Zakunthos, especially as we find the termination used in, *e.g.*, *ὀστρακίνδα παίζειν* (*βλέπειν*). All we can say is that there was in Lycia and elsewhere in early times a race not Indo-European with which the Lycians of history may or may not be connected.

Kretschmer's view is more sober. To put it shortly, he takes the *-nda*, *-ησσος* names to belong to a race comprising Lycian, Lydian, Mysian, and Carian, which he calls the *Kleinasiatisches Volk*, but says nothing as to its affinities, except that it is not Indo-European. He rejects the argument that the Lycian verb has an Indo-European termination (not knowing of the nasal vowels), and he does not discuss the noun. As signs of its not being Indo-European, he instances such combinations as initial *kb*, *χb* in *kbe*, *χbati*, &c., *lbbiyöi* (although we do not know what vocalisation is here suppressed), the doubling of suffixes, *e.g.*, in the genitive, and the vowel-harmony (typical of Ugro-Altaic languages) which Arkwright points out.

Perhaps, in conclusion, a further possible view may be very briefly stated. So far as the grammar is known it seems that an unprejudiced person must admit at least a probability that it is Indo-European and nearly related to old Persian. That the words for kinship do not agree with this, as they ought, seems to Pauli a sufficient reason for rejecting it. But such general rules cannot be laid down. Nothing can be more remote than English and German *son*, *wife*, from Latin *filius* and *uxor*, yet the languages are closely akin. This does not mean that when we know Lycian as well as Latin we shall find that *tideimi* and *lada* are good Indo-European, but simply that the general statement is untrue. Yet the vocabulary certainly seems to be for the most part not Indo-European. The list of words given before, shows it, as well as our inability to translate a single line except what we know from the bilinguals. The subject is full of difficulty. We do not, for instance, even know whether the language on the northern and western sides of the Xanthus stele is the same as the rest—whether it is poetry or Carian. In fact, the inscriptions must be interpreted from themselves before we can decide these points or get any help from comparative philology. If some words seem to have an Indo-European look, that is only what we might expect. Considering the position of the Asia Minor tribes, it is only natural that all these languages should be very much mixed. Take such a case as the well-known Phrygian gloss *γάνος*, *παράδεισος* (Heb. *gan*) *χάρμα* . . . *ἡδόνη* (to explain *Γανυμήδης*, from Greek), &c. While un-Indo-European words do not prove the vocabulary to be un-Indo-European, so Indo-European words do not prove the contrary. Most probably the language is mixed, an original Indo-European tongue keeping its grammatical forms and taking on the vocabulary of an alien race of conquerors or conquered, very much as a page of Macaulay's English is Saxon in grammar, but almost wholly French or Latin in vocabulary. Who or what the foreign race may have been is very hard to conjecture. The name *Λύκιοι* seems Greek, and if the *Ruku* (*Luku*) of Rameses I. are the same, they would appear to have been probably

in Asia Minor in the fourteenth century, B.C. In that case were the *Termilai* the foreigners? If so, we need not expect the name *Termilai* to have anything to do with a wolf-totem, as Hall suggests. The position of the monuments, in a fringe round the coast, certainly looks as though their authors came by sea. If so, their alleged Cretan origin seems possible. Hall suggests interpreting Evans' pictographs by Lycian. Before anything certain can be obtained we must read the monuments. It certainly seems a reproach to us that the Xanthus stele and the Agram mummy defy decipherment—not to mention the Hittite monuments.

A. E. COWLEY.

Crete. Evans.

Excavations at Knossos in Crete. *Extracts from a Letter from Arthur J. Evans, M.A., F.R.S., Director of the Cretan Excavation Fund, dated March* 23, 1902. *Communicated by the Secretary of the Fund.* **53**

The operations of the Cretan Exploration Fund have this year been restricted to Knossos, where Mr. Arthur Evans has continued, for a third season, the excavation of the prehistoric palace. The work has been greatly hindered by an abnormally rainy spring, but considerable results have been obtained already. Mr. Evans writes that "A "new hall has been uncovered, south of the 'Hall of the Double Axes,' which was "excavated last year, with an unique system of stylobates and a small bath-room in the "corner, to the sides of which, above the fine gypsum lining slabs, remains of a painted "frieze still cling."

The last week of March "brought an interesting development in the shape of a "small staircase, two flights of which are preserved, apparently leading up to the "*thalamoi* of the upper floor; the doorjambs and thresholds of which are still in "position. A fallen block shows that the stairs went up to a third story; the block "shows the traces of the side of an upper flight.

"Some good remains of fresco have occurred, quite an aquarium of fish in the style of the Melian fresco (*Ann. Brit. School*, 1897–8, Pl. III.), a new lady in a yellow jacket, a part of a brilliantly-painted bird in a new style of stucco relief, which is rather *intaglio* and suggests the gem engraver's craft.

"A very remarkable find is a kind of *lararium* in a 'late Mycenæan' room with a small painted terra-cotta figure of a goddess, with cylindrical body, bearing a dove on her head and holding up her hands, while opposite is a small similar figure of a male votary holding out a dove. Between them was a small votive double-axe of steatite.

"A small stucco closet belonging to the earliest palace period contained a series of late 'Kamáres' pots, some with very naturalistic lilies, white on lilac brown ground—the most naturalistic design of the kind yet found on Ægean pottery.

"Many tablets have occurred; one deposit shows figures of swords and refers to the armoury. A very large hoard shows figures dealing in percentages.

"Somewhat low down on the east of the site mighty stone walls were beginning "to appear"—at the end of March—"with stairs running down their bastion."

It will be seen from what precedes that in spite of inadequate funds, which have made it impossible to carry on more than this single piece of work this season, the present campaign has been far from unproductive hitherto, and that though a very large area has already been cleared down to the principal Mycenæan layer, there remains enough at Knossos itself to occupy the excavator for at least the remainder of the present season. It should, moreover, be remembered that below the Mycenæan level there lies, as at Tiryns and at Phylakopi, a considerable depth of earlier settlement-*débris* (MAN, 1901. 146), which has only been sounded hitherto in a merely preliminary way.

J. L. M.

Mexico. Dalton.

Reproductions of Nahua Manuscripts.

By O. M. Dalton, M.A., F.S.A.

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In a short note in *Journ. Anthr. Inst.*, XXIX. (N.S., II.), pp. 337–8, attention was drawn to the fine series of reproductions of Nahua manuscripts edited by various specialists under the auspices of the Duc de Loubat, honorary president of the Society of Americanists of Paris. The series has now been enriched by the addition to the list of the Codex Fejervary-Mayer, a pre-Columbian MS. of the Free Public Museums at Liverpool. It is much to be desired that the existence in our great public libraries of these valuable aids to the study of Mexican antiquities should be more widely known, and that it should be understood that the whole series is available for purposes of study. The appended photographs are intended to give a general idea of the appearance of Nahua hieroglyphs; four are taken from books produced before the Spanish invasion, and differ essentially from the later examples, such as the *Codex Mendoza* of the Bodleian Library; the fifth is from the *Codex Rios* of the Vatican, which was painted after the advent of the conquerors. It was of course to be expected that in a country so extensive as the Mexican Empire, different districts should produce different schools of painters, and that the MSS. of one province should differ in style from those of another.

FIG. 1.
PAGE FROM "CODEX BORGIANUS" (VATICAN).

Figures 1 and 2 reproduce pages of the famous *Codex Borgianus* in the Vatican; Fig. 3 is a page from a MS. at Bologna known as the *Codex Cospianus*; Fig. 4 is taken from a *Tonalamatl* or diviner's book of lucky and unlucky days, out of which horoscopes were cast, and of

FIG. 2.
PAGE FROM "CODEX BORGIANUS" (VATICAN).

this it may be of interest to give more detailed explanation. The particular manuscript from which the illustration is taken is preserved in Paris, and has been edited for the Duc de Loubat by Professor Seler of Berlin, to whom the interpretation is due. The Nahuas employed for religious purposes a cycle of 260 days, which could be divided into 20 periods of 13 days each, every day and every hour being placed under the influence of a good or evil deity. The Paris *Tonalamatl* had originally 20 pages, one for each period, of which that here illustrated is the third. In the larger square in the upper left-hand corner sits the god who rules the week. His name is *Tepeyollotli*, meaning "the voice from the interior of the mountains"; he appears under the form of a jaguar, and is here identical with the god of war. The other figure is *Quetzalcoatl*, the wind god, bringing forward a human sacrifice. Between the two are various symbols; among others, spears, a brazier, and a conch-shell trumpet, signifying battle, conflagration, and the ominous voice of the jaguar. The remaining 52 small squares are divided for purposes of explanation into four vertical columns of four squares each, A–D, and four horizontal lines of nine each, E–H. Column D and line H contain the signs of the 13 days of the "week"; they read from top to bottom of D, and from right to left of H, as follows: deer, rabbit, water, dog, ape, brush, reed, jaguar, eagle, vulture, "rolling motion," stone-knife, and rain. They all belong to the regular Mexican series of 20 days, though in this manuscript 13 and not 20 has been taken as the unit. Column C and line G contain the pictures of the "Lords of the hours of the night," and are read in the same order. They are the gods of rain, fire, stone-knife, the sun, maize, death, water, earth, the heart of the mountains, rain, fire, maize, and the sun. The Lords of the night are really only nine in number, but four of them are twice repeated, making up the number 13. Columns A, B and

FIG. 3.
PAGE FROM "CODEX COSPIANUS" (BOLOGNA).

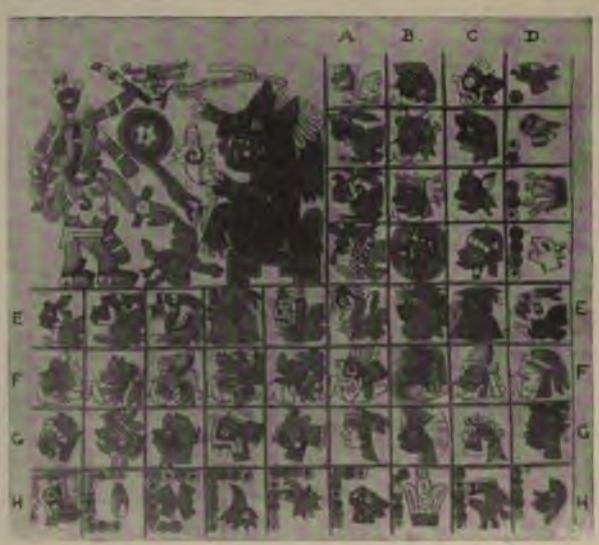

FIG. 4.
PAGE FROM A "TONALAMATL" (PARIS).

lines E, F form a duplicate series representing the 13 Lords of the hours of the day, each lord having an alternative in the shape of a bird. Column B and line F give the gods proper, several of them identical with the Lords of the night hours; columns A and E their bird-symbols, among which may be recognised the horned-owl, the turkey-cock, and the eagle. The remaining pages of the manuscript are arranged upon a similar principle, and it may be imagined that from such materials destinies of the most varied description might be easily assigned to those who came to consult the oracle. Fig. 5 is taken from the post-Columbian MS. in the Vatican Library, known as the *Codex Rios*. It is here reproduced partly by way of contrast with the indigenous work unaffected by Spanish influence, partly because it affords a good illustration of human sacrifice in ancient Mexico. The method adopted was, it will be remembered, to tear out the heart of the victim with a pointed knife of stone or obsidian of the type represented in most museums which possess collections of Mexican antiquities.

FIG. 5.
PAGE FROM POST-COLUMBIAN "CODEX RIOS" (VATICAN).

In addition to the above manuscripts which form part of the series of the Duc de Loubat, another codex has just been reproduced in facsimile by the Peabody Museum, Harvard University, with a commentary by that indefatigable student of Mexican antiquities, Mrs. Zelia Nuttall. This book, the property of Lord Zouche and preserved in the British Museum, is painted on deerskin, and is probably painted by the same hand as the fine manuscript in the Imperial Library at Vienna. Like the Vienna Codex, it was sent to Florence not long after the Conquest, and was ultimately placed in the library of the Monastery of San Marco, until some thirty or forty years ago it was sold to a wealthy Englishman, who presented it to the 14th Lord Zouche. It appears to contain historical episodes, perhaps the achievements of the warriors who extended the borders of Mexico during the reign of Montezuma. Mrs. Nuttall will publish short papers embodying the results of her analysis of this codex. O. M. DALTON.

REVIEWS.

Sociology. **Kidd.**

Principles of Western Civilisation. By Benjamin Kidd, Author of *Social Evolution*. London: Macmillan & Co., Ltd., 1902. 8vo. pp. vi–518. 15*s*. net. **55**

Mr. Kidd's gospel is the gospel of "Projected Efficiency." This means "the "progressive subordination of the present and the individual to the future and the "infinite." Western civilisation, as represented especially by the Anglo-Saxon

democracies, has, we are told, been showing itself ever more capable of planting the tree in order that some quite indefinite other may enjoy the fruit, or rather may gather the seeds for the planting of fresh and finer trees. Universal suffrage, factory legislation, a living wage, the abolition of private monopoly—these ideals have been, and are, pursued in the name of "social justice," and not because of any profit that is likely to accrue therefrom to anyone in particular: for, humanly speaking, the claims of social justice are not to be satisfied; whilst, nevertheless, it is only in striving after the furtherance of this never-ending task that man can, and will, attain to his "rights." Thus social justice is incompatible with the ends of socialism and of *laissez faire* alike. There can be no comfortable fruition, whether for the many or for the few, of an achieved materialistic paradise in this world. The spiritual rewards of spiritual effort constitute the entire prize of those whose glory it is to ask for no prize. Meanwhile, Western civilisation, in so far as it embodies this attitude towards the future, is the pioneer of a new era in the world's history. Mr. Kidd labours to show that "the ascendency of the present" was the "controlling meaning" of Græco-Roman civilisation, and that, in mediæval and modern times, whenever some "closed imperium"—be it church, or state, or economic system—seeks to render itself absolute, the same spirit betrays itself, namely, a spirit intolerant of progress as bound up with a free and honourable conflict of opinions. Western Liberalism (as apart from Manchester Liberalism), on the other hand, makes for an end which is "beyond the limits of political consciousness" altogether, and which, viewed from *our* standpoint, appears as the progressive synthesis of asymptotic opposites.

Well, this is at any rate a sturdy gospel. No fat ease either for labourer or for labour-lord, but continual fighting—with arguments, or even, in the last resort, with fists—on behalf of "social justice," "the species," "the spiritual," "the cosmic," "the infinite," and so forth. And Mr. Kidd preaches powerfully. He composes, it is true, somewhat in the style of "This is the house that Jack built." But, if a moral is to be hammered into the popular mind, it is desirable that he who reads as he runs should be offered at least ten chances of reading to one of running. Mr. Kidd, however, poses, not as a preacher, but as a philosopher. The book announces itself as "the first volume "of a system of evolutionary philosophy." Now surely these are over-proud words. First as to "evolution." Mr. Kidd in a single sketchy chapter tries to play off Weismann's notion that death somehow came into the world at the bidding of natural selection against Darwin's doctrine that the individual member of a species tends to survive "if it vary slightly in any manner profitable to itself." But "profitable to itself" is in the mouth of the pure biologist a not unpermissible, because hardly misleading, metaphor; and so it is with "natural selection," and a heap of other Darwinian phrases. Darwin is scarcely to blame if naturalistic metaphysics insist on taking expressions like the "beneficence" of natural selection literally. Meanwhile, Mr. Kidd's instinct in protesting against the individualism resulting from crude applications of misinterpreted biological formulæ to human society is perfectly sound. But a "philosophy" must seek to give the "how" and "why" of the laws it alleges. Instead, Mr. Kidd is content to refer vaguely to society as an "organism." This is but to combat one Spencerian heresy by the aid of another equally gross. Then as to the "necessity" of the evolutionary process our author believes himself to have discovered. Man, he tells us, has no "power peculiar to himself of suspending the "cosmic process and of substituting for it another of his own imagining." On the other hand, the salvation of society is to come from a "new condition" which is essentially an ideal of the human spirit, and which it is the business of the "scientific imagination" to make explicit. Mr. Kidd seems to have got hold of the half-truth that human progress is brought about by a *volonté générale*, which is something more than any *volonté de tous*, and he is consequently led into belittling introspection and

personality and the personal "moment" in history. Philosophy, of course, has not got to the bottom of these difficulties, and perhaps never will. But in the course of thinking them out it has gone a long way past Mr. Kidd. Indeed, Mr. Kidd has not even mastered the current language of philosophy. Take but one case—his use of the term "universal." Social justice, no doubt, is universal. But so is social injustice. Good men devote themselves to "principles." So often do bad men—to bad principles. Nor is Mr. Kidd even capable of writing what is called a "philosophy of history." His historical knowledge is inaccurate, and mostly, it would seem, at second hand. Take but one case again—his characterisation of Græco-Roman civilisation. Is "the ascendency of the present" the "controlling meaning" of Aristotle's social ideal? (Mr. Kidd, despite himself, had to admit qualifications in the case of Plato.) What about ἐφ' ὅσον μάλιστα ἐνδέχεται ἀθανατίζειν? Or can the complex phenomena of Græco-Roman religion be fairly lumped together under the head of "Ancestor-worship"? The only mercy is that Mr. Kidd did not say "Totemism" at once! No. Mr. Kidd commands a wide audience, and does so in virtue of many solid merits. Let him, therefore, be careful to avoid giving offence to the more critical section of that audience by a parade of catch-words such as "evolution," "philosophy," and the like. Such a device may be pardonable in the journalist, but in the present case it but detracts from the dignity of what is intrinsically a thoughtful and suggestive piece of work.

R. R. MARETT.

Turkestan. **Stein.**

Preliminary Report on a Journey of Archæological and Topographical Exploration in Chinese Turkestan. By M. A. Stein, Indian Educational Service. Published under the authority of His Majesty's Secretary of State for India in Council. London: 1901. 4to. 17 pp., with 16 plates and 313 illustrations. **56**

This preliminary report is intended to give a general idea of the results obtained by Dr. Stein in his recent exploration of the remains of the ancient civilization now buried beneath the sands of the Taklamakan Desert. It is to be followed by a detailed report, in which these discoveries and their bearing on the history of ancient Central Asia will be fully discussed. The nature and extent of these discoveries justify us in expecting from them one of the most notable additions to our knowledge of the ancient world that has been made in recent times. From the wooden tablets and parchments bearing inscriptions in a modified form of the Kharoṣṭhī character as it appears on the coins of the Indo-Scythic princes of Northern India, we may especially hope to recover some of the outlines of a lost history; for these regularly bear the name of the ruling king and the year of his reign with the month and day; and their contents, when fully deciphered, can scarcely fail to throw light on the social and political life of the period. The artistic objects, too—sculptures, terra cottas, seals, paintings, &c.—will raise some curious and interesting questions. A glance at Dr. Stein's illustrations will show what was scarcely suspected before, that the influence of Græco-Roman art in the early centuries of our era extended even to this remote region, and came into contact there with the art of China and Tibet.

Dr. Stein's purpose was mainly archæological, but, both throughout his journey from Srinagar to Khotan and during his stay in the neighbourhood of the latter town, he lost no opportunity of studying the people and the country. His linguistic, ethnographical, and geographical investigations, which will find a place in his final report, will no doubt prove to be of great interest and importance.

Not the least curious of the problems which this district of Central Asia offers is the question through what causes a once flourishing country should have become a vast desert. Dr. Stein's investigations show that the encroachment of the sand was gradual. The various sites were abandoned by their inhabitants in a leisurely manner, which

allowed them to take away all articles of intrinsic value; and the coins found in the different sites show that they were abandoned at different dates, extending over a period from about 100-800 A.D.

Dr. Stein's scholarly method is as apparent in this report as in all his other writings. His minute and systematic record of the circumstances in which his different discoveries were made, and of the precise spot in which each particular object was found, gives to his results a value which those of a less careful excavator would not have possessed.

E. J. RAPSON.

Sociology. **Crawley.**

The Mystic Rose: A Study of Primitive Marriage. By Ernest Crawley. London, 1902. pp. xviii–492. **57**

This book is a study of the modes of early thought which underlie marriage customs, and of the connection of these with the primitive conception of human relations in general. The author believes that there has been too great a tendency to interpret marriage customs by the application of legal conceptions which are of much later development than the customs they are supposed to explain, and he endeavours to give a fundamental psychological basis to the customs in question.

The argument is directed to show that all relations between human beings are regarded by primitive man as having an element of danger, and that this conception of danger is intensified whenever there is anything unusual or abnormal in these relations. This idea of danger becomes especially prominent in connection with physiological functions, and several factors concur to intensify it in the case of marriage. Mr. Crawley considers the various measures adopted by primitive man to counteract and neutralise the danger, and then attempts to show that the customs and ceremonies connected with marriage are designed to obviate the dangers attendant on entrance into the marriage state.

Many of the customs thus explained are commonly regarded as survivals of certain stages through which the institution of human marriage is supposed to have passed. The custom of taking the bride by violence, which is referred by Mr. Crawley to a natural reluctance to enter on a dangerous state, has commonly been regarded as a relic of a state of society in which wives were habitually captured from another tribe, while various other customs which have been commonly held to be evidence of a condition of primitive promiscuity are supposed by Mr. Crawley to be designed to transfer the dangers of marriage to substitutes of various kinds.

The Mystic Rose is far more, however, than a mere attempt to explain marriage customs. It is rather an endeavour to formulate some of the fundamental principles which regulate all kinds of human intercourse. Among the various methods designed by primitive man to counteract the dangers of contact, one of the most important, according to Mr. Crawley, is that of inoculation, and especially mutual inoculation, in which each of the individuals who stand in the dangerous relation to one another takes to himself some part of the other. As a type of this mutual inoculation, Mr. Crawley has, somewhat unfortunately, chosen an obscure custom existing among the Narrinyeri of South Australia, in which the bond between two individuals is a piece of umbilical cord (*Kalduke*), the individuals so associated being *ngiangiampe* to one another.

The conception of the relation of two individuals to one another, which is typified by this *ngiangiampe* custom, is regarded by Mr. Crawley as being the fundamental conception regulating human intercourse, and as having preceded even the conception of blood kinship. The habitual close relation arising from a common food supply, or from any other cause, is held to be a form of the *ngiangiampe* relation out of which the idea of blood-kinship has developed. The bond or *Kalduke* uniting two brothers is that of

having the same mother, and this bond is held to be the basis of the maternal system of kinship. Marriage itself is regarded as simply one form of the *ngiangiampe* relation.

An explanation of exogamy is advanced, which is similar to that suggested by Dr. Frazer (*Fortnightly Review*, LXV., 841, 1899), viz., that it is an institution designed to prevent marriage between those too nearly related to one another, or, as Mr. Crawley would rather put it, between those closely connected by any form of the *ngiangiampe* relation. Mr. Crawley supposes that parents would prevent such "an offence against the harmony of the house" as would be involved in the dangerous state of marriage.

It is not possible here to criticise Mr. Crawley's views at any length. In general, it may be said that the book is suggestive rather than convincing. There is a lack of appreciation of the complexity of the subject and of the difficulties involved in the treatment of anthropological evidence. The author's enthusiasm for his own point of view often makes his treatment very one-sided. For instance, he lays great stress on the custom (which is very rare) of separation of brother and sister, and passes over very lightly the custom (which is very common) of sexual laxity before marriage, a custom which affords one of the most obvious arguments against the author's views.

Mr. Crawley is not content with showing that certain customs which have been regarded as evidence of a former condition of promiscuity may have another explanation, but he absolutely rejects the whole idea, and in his ardour against this view allows himself to make statements that the maternal system is simply a method of genealogy, and that early man has no property to be inherited. The value of the book is seriously diminished by the author's dogmatic and partial attitude towards problems which cannot yet be regarded as settled.

In spite of defects, however, *The Mystic Rose* is welcome as a very suggestive contribution to anthropological literature, and it has the very great merit that it is a genuine attempt to further one of the chief aims of anthropology, viz., the reference of the various forms of human activity to fundamental properties of the human mind.

W. H. R. RIVERS.

India: Folklore. **Rice.**

Occasional Essays on Native South Indian Life. By Stanley P. Rice. London: Longmans, 1901. 8vo. pp. vi–223. Price 10*s.* 6*d.* **58**

Mr. Rice has been in a position to gather information of interest and value to the etymologist. A full account of the Urijas of Ganjam among whom he lived would have been of much value. What he has actually given us is rather disappointing. He has not been able to find any children's games; he tells us there is nothing remarkable in their religion, in which he does not include "superstition"; he has found a few Märchen and given us the gist of them. The marriage ceremony is described in rather more detail, but we are expressly told that much is left unsaid. The author has, on the whole, not fully realised the necessity of fulness.

Mr. Rice has not written a work from the anthropological standpoint, but he has none the less succeeded in giving us some interesting parallels to European and other customs. The toddy drawers of South India are at enmity with the squirrel, which is, however, regarded as favoured by the gods. In the marriage ceremony the bridegroom has to sit on a flat stone while the bride's relatives try to dislodge him. There is a case of fire-walking, in this instance an ordeal to be undergone by a human god. There are beast-tales and stories of werwolves. The Urijas will not kill bears because they may be tenanted by the souls of their grandmothers.

If the author has not collected as much as we could wish, we may hope that he will give us another volume, approach his subject in a scientific spirit, and, above all, give us an index.

N. W. T.

Malay: Folklore. **Skeat.**

Fables and Folk-Tales from an Eastern Forest. Collected and translated by Walter Skeat, M.A. Cambridge: University Press, 1901. 22 by 18, pp. 92. **59**

In this beautifully printed little book, Mr. Skeat has published translations of six-and-twenty stories taken down by him "from the lips of the Malay peasantry, in the "twilight of their own tropical jungle, during the progress of the Cambridge Expedition "of 1899 through the remoter states of the Malay Peninsula." It would have been easy for him to embellish them with literary ornaments, or to give many of them a more artistic turn; but he has preferred (and rightly, from the scientific point of view) to publish them just as they were told. In their present state they are documents of value to the anthropologist; had they been doctored they might have been made more charming, but their real value would have been destroyed.

Several of them are old friends. Mr. Skeat notes one as being in the *Gesta Romanorum*. "The Pelican's Punishment" is a well-known tale in the *Jâtaka*. "The King Crow and the Water-snail" is described as "an old friend in a new dress." The old friend in this case is "The Hare and the Tortoise"; but the dress is not quite new. Brer Rabbit found his match in Brer Tarrypin, in exactly the same way as the King Crow found it in the Water-snail. "Father Follow-my-Nose and the Four Priests" is a widely-spread story in Europe as well as the East. All these and others will be interesting to the storyologist.

Nor will the evidences of Malay superstition and the historical legends be less attractive to the student of folklore. Such are the belief in the Gedembai (gigantic beings who by the utterance of the name of the persons addressed could turn them into wood or stone), the legend of Patani, and the divination at the tombs of certain saints. Mr. Skeat has himself put the powers of the saints in question to proof, and it is greatly to be hoped that the result will come true.

His notes on the tales are useful. He has added a map and an index, for which he deserves the student's blessings. E. S. H.

PROCEEDINGS OF SOCIETIES.

Proceedings. **Conférences Anthropologiques.**

Conférences Anthropologiques: Association d'Étude et de Vulgarisation. **60**

A group of members of the Anthropological Society of Paris have recently formed themselves into an association for the advancement and diffusion of anthropological studies. This new association, constituted alongside of the older, more dignified, and more ceremonious Society, is to have the especial *rôle* of popularising the Human Sciences, in their more practical application, by free public lectures, which will be designed to present the methods and results of recent anthropological research in an attractive and intelligible form.

The subscription is fixed at a minimum of five francs per annum. Ladies are eligible as members. The executive consists of Dr. Chervin, president; M. Lejeune secretary; Dr. P. Regnault, treasurer. The office of the Association is at 49, Rue Saint-André-des-Arts, Paris. The lectures take place on Tuesday evenings, and the first series consists of the following:—

February 5.—M. Jacques Bertillon: "Le Problème de la Population."

March 4.—M. Martial Imbert: "L'Art décoratif chez nos Ancêtres."

March 11.—M. Léon Gérardin: "À la Conquête de l'Aliment."

March 18.—M. Charles Alluaud: "Madagascar" (with lantern illustrations).

March 25.—M. P. Nicole: "Les Proto-Chrétiens."

The conception would seem to be an admirable one; and the members of the new Association may rest assured of the good wishes of their British colleagues.

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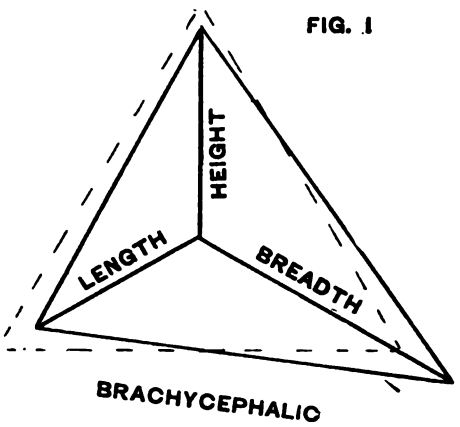
MIDDLE ITALIAN

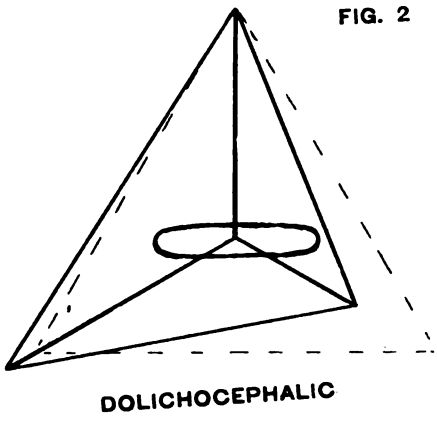
FIG. 1



BRACHYCEPHALIC

AUSTRALIAN

FIG. 2



DOLICHOCEPHALIC

TRIANGLE OF THREE DIMENSIONS OF SKULLS,
COMPRISING THREE INDICES, THREE SECTION AREAS, AND CAPACITY.
OVAL SHOWING NASAL INDEX (WIDTH) AND ALVEOLAR INDEX (HEIGHT).

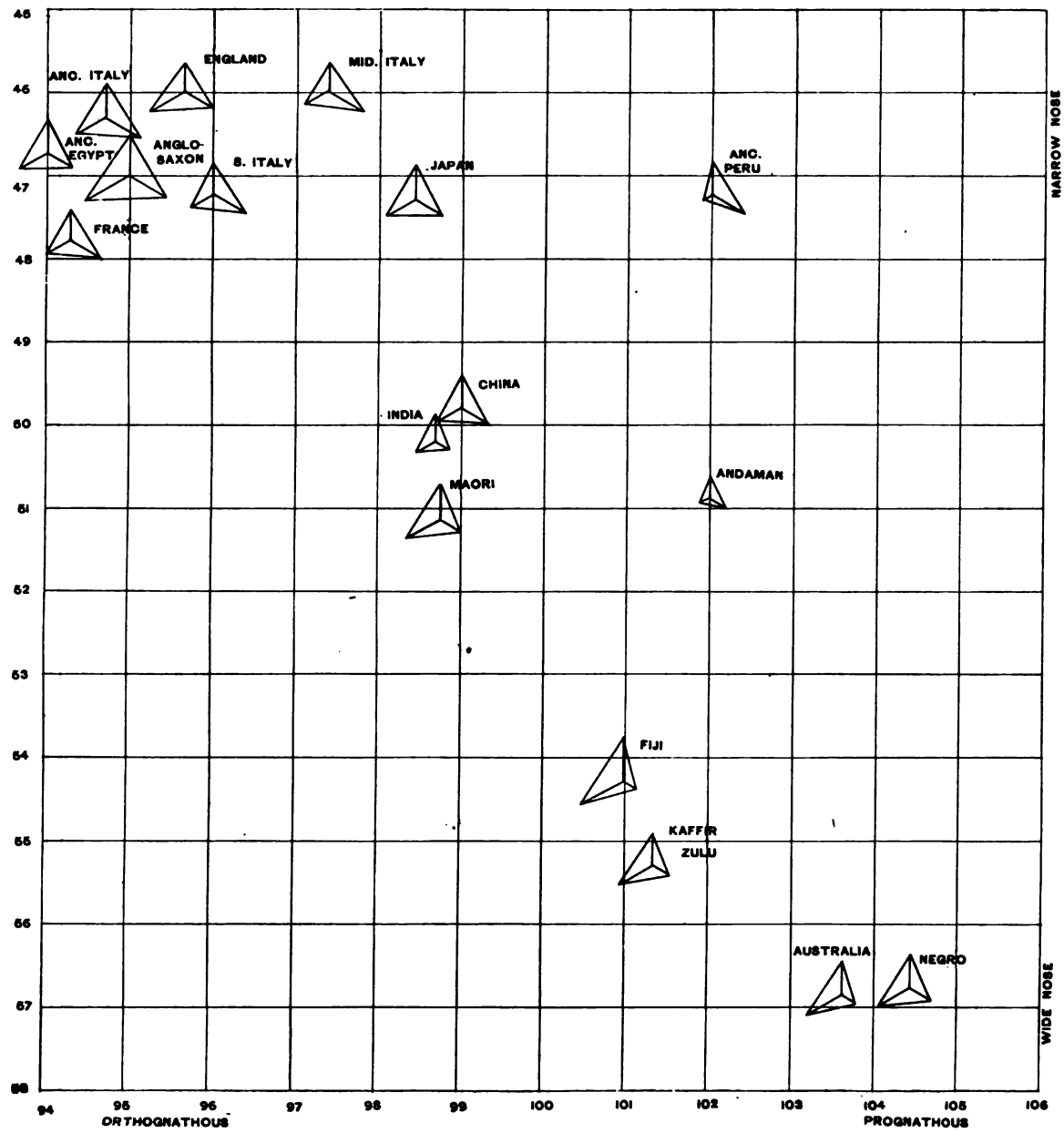


FIG. 3.—DIAGRAM OF ALVEOLAR AND NASAL INDICES OF RACES,
EACH RACE MARKED BY SKULL TRIANGLES (MALE ONLY).

ORIGINAL ARTICLES.

Method. With Plate F. Petrie.

The Use of Diagrams. *By W. M. Flinders Petrie, D.C.L., LL.D., F.R.S., Edwards Professor of Egyptology, University College, London.* 61

Diagrams are so essential, both for research and for exposition, that it is worth while to consider their scope and utility apart from any special subject. A wide distinction must be observed between (1) the expository diagram, which is merely to illustrate some distinct correlation, and which seldom presents much complexity; and (2) the research diagram in which it is needful to combine as many variables as possible, and which requires some training in the observer before it can be used. The main object in such diagrams is to present as many variables as possible in one view, with such clearness that the eye can grasp any two at once without being distracted by others.

1. The simplest form of diagram is that of distribution of a single variable, generally drawn by a row of dots along a scale. This is very commonly used in any subject for observing the middle of a group, for any erratic example which may be due to exceptional causes, for breaking up into separate groups, or for detecting periodic recurrences.

2. The combination of two quantities is the purpose of most diagrams, either for the frequency of different values of one variable, as in the usual probability curve, or for the relation of two variables, as in the barometer curves of time and pressure.

It often happens that two variables are usually combined to form a ratio, as in the length and breadth of the skull; if so, the diagram should be so arranged that the resulting ratio is obvious. This was started both in the diagram of the Aberdeenshire skulls (*Journ. Anthr. Inst.*, XXX., 104), and also in that which I designed for the Egyptian skulls. In the latter I brought in another element by distinguishing each individual by a number, so that reference between one diagram and another was practicable.

3. So far we have only noticed two variables expressed in two dimensions. A third dimension is needful for a third variable, and though a cubic diagram would be too cumbersome, yet the same end is reached by placing the numerical figure of the third variable on the position of the example in the two other variables, like a level on a map; for instance, the diagram of birth-rate in Brazil connected with the ages of both parents, as drawn up by Mr. Galton. Contour lines of equal height of the third variable may well be used.

In all these simple diagrams some observation is needful to extract the full meaning, and the physical sense of each grouping or irregularity must be carefully kept in mind. But beyond using the three dimensions for three variables no advance is possible (setting aside differences of colour) without bringing in a fresh principle of compound diagrams, in which diagrams on a small scale are distributed over a diagram on a large scale.

4. For this purpose it is needful to form small, compact, and intelligible diagrams of two or three variables, the variations of which shall readily catch the eye and not be liable to be confused. A ready way of combining skull dimensions is by three radii:—(1) upright for the height; (2) to one side for the length; (3) to the other side for the breadth (*see* Plate F, Fig. 1). Then, if the ends of these be joined up, they form a triangle, the inclinations of the three sides of which show the indices of length : breadth, length : height, and breadth : height. Thus the indices can be compared by the slope of the sides of the different triangles, *e.g.*, the brachycephalic sloping as at the base of Fig. 1, and dolichocephalic sloping as in Fig. 2.

Further, in these triangles the whole area varies with the capacity of the skull, and the area of each of the three triangles within the large one varies with the area of the

three cross sections of the skull, vertical fore-and-aft section being shown by the left hand inner triangle, vertical cross section by the right hand, and horizontal section by the lower triangle.

Thus this triangle (which may be regarded as the diagonal view of a cubic solid proportioned to the three dimensions) shows not only the three dimensions, but also the three ratios, the three sections, and the capacity, sufficiently for all comparative purposes.

In order to render the variations the more distinct, of course the total dimension is not shown, but only the variations on each side of the mean, and this is best arranged by taking the mean value of each dimension as a zero and representing that by one point of an equilateral triangle, shown in Figs. 1 and 2 by broken lines, then variations less or greater than the mean are plotted inside or outside the mean point. (This is the principle of "concentrated errors" which I used in the pyramid survey, 1882.) Thus the *meso*-indices are shown by the equilateral form. Therefore, to start with, a mean value for each dimension is needed, and the mean skull of over a dozen races of different quarters of the globe has :—

Length - - - -	183 mm. (var. 169–193)
Breadth - - -	140 mm. (var. 131–148)
Height - - - -	135 mm. (var. 130-141)

The variations, greater or less than these means, are plotted on the actual living size inside or outside the points of the equilateral triangles in Figs. 1 and 2.

5. Having, then, a small compact diagram in which the eye can readily grasp the variation of the dimensions and indices of the skull, these diagrams can be compounded in a diagram of other variables by placing them as indicators of two other components. For instance, in Fig. 3 we have the alveolar index and the nasal index as the two dimensions of the diagram ; thin-nosed races at the top, broad-nosed races at the base, prognathous races at the right, orthognathous at the left ; and each race is indicated by its skull triangle. Let us now learn to read this diagram of five variables :—

A. The general distribution is in a line from high left to low right, *i.e.*, the broad nose accompanies prognathism. The Peruvian and the Eskimo (beyond this diagram limits) are exceptional in the narrowness of the nose, but that is accounted for by the extreme dryness and extreme cold requiring a narrow nostril to render the air fit for the lungs. Otherwise the distribution is in a compact line.

B. The triangles are short on the left at the upper region and run out to the left below, *i.e.*, the thin nose accompanies a short head, the broad nose a long head. The Peruvian and Andaman showing that the length is connected with the nose rather than with the prognathism.

C. The triangles are longer to the right at the upper region and shorter in the lower, *i.e.*, a wide head accompanies a thin nose and a narrow head a wide nose.

D. The height of the triangles is nearly equal throughout, *i.e.*, height of the skull does not affect the nasal index, and therefore does not go with a long nose.

E. The area of the triangles is rather greater at each end of the line and lesser in the middle, *i.e.*, a very upright face or a very wide nose accompany a large capacity.

The special features of some races show very distinctly ; the large left-hand inner triangle of the Fijian shows that in vertical fore-and-aft section he exceeds all other races, the close similarity in all five constants between the French and Italian, or the Egyptian and Japanese, or the Maori and Hindu is striking, and shows how little such resemblances are worth for proving an identity of race.

6. Having now shown the use of compound diagrams, one superposed on another, we can carry this farther by compounding two superimposed diagrams. In Fig. 2 an ellipse is placed around the centre. The variation of breadth of this represents the variation of nasal index, and the variation of height the orthognathism; thus the five variables that we studied in the last diagram can be all compounded into one figure for placing on other diagrams. How this actually works is seen in Fig. 4 where these five variables are placed to indicate each race on a sheet of other components, the races of the hottest climates being at the top and the coldest at the base, the least intelligent at the left hand and the most intelligent races at the right. Here we have seven

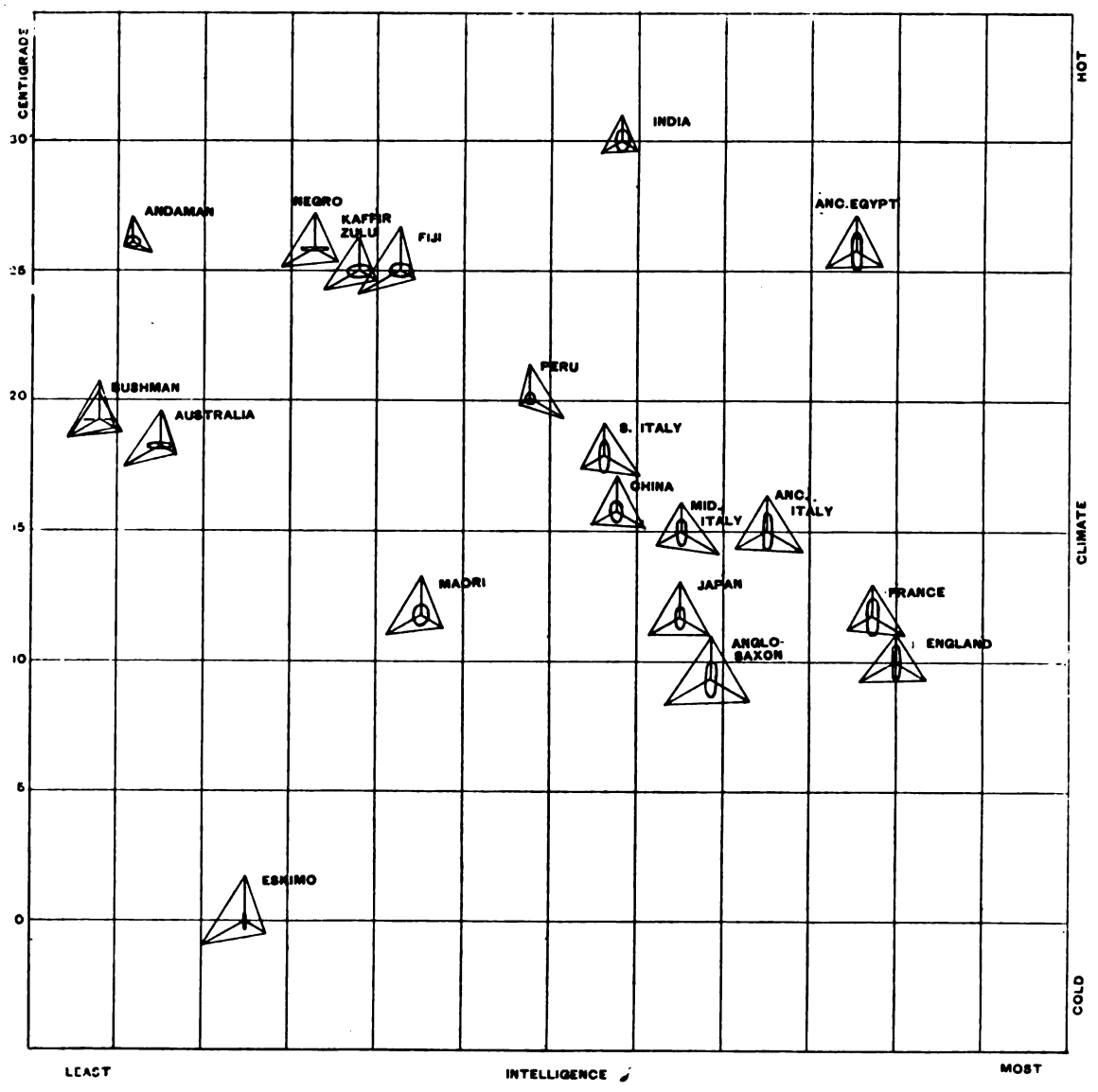


FIG. 4.—DIAGRAM OF CLIMATE AND INTELLIGENCE OF RACES, EACH RACE MARKED BY SKULL TRIANGLES (MALE ONLY). IN EACH TRIANGLE OVAL OF NASAL AND ALVEOLAR INDICES.

variables compounded, and can trace any correlation between any two of them. On reading this sheet we notice—

A. The left-hand triangles slope out to the left, *i.e.*, the long heads are of the lowest ability.

B. The middle triangles slope out to the right, *i.e.*, the broad heads are of medium ability.

C. The right-hand triangles are mostly equilateral, *i.e.*, a mean type of skull is the most capable.

D. The long heads have decentralised government, the wide heads highly centralised, the mean type enjoy a judicious mixture of rule.

E. The best types at the right have a well-balanced length and breadth, but have even less height than many lower races, *e.g.*, the English 133, the Japanese 136, the Maori 138.

F. The triangles are smaller at the upper region and larger at the lower, *i.e.*, the capacity is least in hot climates and greatest in cold.

G. There is no clear difference between the sizes of the triangles on opposite sides of the sheets, *i.e.*, capacity does not vary with intelligence as between races, though it may as between individuals in similar conditions. The hottest climate produces the small head of the Hindu, the coldest climate the large head of the Eskimo.

H. Looking now to the ellipses in each triangle they are widest to the left, narrowest to the right, *i.e.*, a wide nose belongs to an inferior type and a narrow nose to the more intelligent races. But the nose has no relation to temperature except in the case of the frozen Eskimo.

I. The height of the ellipses is greatest on the right and least on the left, *i.e.*, orthognathism belongs to the superior races. But there is scarcely any relation between height of the ellipses and level on the sheet, *i.e.*, orthognathism does not belong to climate; *e.g.*, the mesognathous Maori is in a far colder climate than the highly orthognathous Egyptian.

The exceptions to the general rules may prove suggestive. The Andamans are peculiar for the roundness of the head, more upright face, and narrower nose, than any people of such low stature and hot climate. They seem like a degraded Chinese type, for a long-headed Hindu would never have become round headed by deterioration. The Japanese is distinctly superior to the Chinese type, as the triangle is more equilateral, the nose narrower, and the face more upright. The orthognathism of the South Italian belongs to a higher type, and suggests degradation; if, indeed, I have not been too hard on him in placing him as equal to the Chinese, though we could hardly grant that he is a better man than the central Italian.

However these delicate questions of mental precedence may be settled; however the fuller materials that might be used might change some suggestions here, it would be immaterial for the sole purpose of this notice, which is to call attention to the methods of compounding many variables for purposes of research and to illustrate modes of study. To have made merely fancy examples would not have shown how far such methods were practicable; hence I have used the actual data of races that were most readily to hand in the catalogue of the College of Surgeons, and I must disclaim any authority for the exactness of the data or results. My only purpose here is to illustrate methods, which may, I hope, be applied more fully than my opportunities permit.

It need hardly be said that further compounding of data may yet be attained by other devices, and that I have purposely not touched on the use of colour, or even shading, as being troublesome for reproduction, though such helps greatly extend the power of combination in research diagrams. For instance, it might be practicable to add a coloured triangle over the black one, to give such variables as the length of body,

leg, and arm ; the arm should be a horizontal radius, the leg sloping down, the body length sloping up ; then on joining these the upright side of the triangle would vary as the whole height, tipping inward if the legs are long, tipping out if the back is long ; the lower side would represent the limbs as a whole ; the upper side would tilt more or less as the hands come high or low on the thighs. Thus this fresh triangle would show relative height, whether due to long back or long legs, whether long arms go with long legs, and the position of the hands on the thigh. W. M. FLINDERS PETRIE.

Religion. Lang.

The Supreme Being and Totems in Saráwak. *By Andrew Lang.* (*Cf. Journ. Anthr. Inst., XXXI.*, pp. 173 ff.) **62**

The *Journal of the Anthropological Institute*, Vol. XXXI., pp. 173–214, contains an admirable article by Messrs. Hose and McDougall on "The Relations between Man and Animals in Saráwak." An account is given of "the conception of a beneficent Supreme Being" entertained by various tribes of Saráwak. The tribes noted by them are in various stages of culture, from the Kenyahs, who cultivate rice, work iron, and dwell in substantial houses, to the non-agricultural nomadic Punans. All of them, with the dubious exception of the Ibans (among whom Archdeacon Penham thinks that the idea "has been prevalent, but has now almost died out"), reverence "a Supreme beneficent Being." Our authors do not think that this conception has been borrowed from the Malays (p. 212) ; they incline rather to hold that the idea of "a "beneficent Supreme Being may be comparatively rapidly and easily arrived at under "favourable conditions such as seem to be afforded by tribes like the Kenyahs and "Kayans—warlike, prosperous tribes subordinated to strong chiefs—and may as rapidly "fall into neglect with change of social conditions, and may then remain as a vestige "only to be discerned by curious research in the minds of a few individuals, as among "the Ibans or the Australian blacks." The Kenyah Supreme Being is conjectured to have been evolved out of the Kenyah war-god, one of many departmental deities (pp. 212, 213).

This theory is not, I fear, compatible with the facts as given by our authors. The Kenyahs have now agriculture, iron work, good houses, and strong chiefs, but it cannot be argued that *after* reaching these conditions they consequently evolved "the conception of a Supreme beneficent Being." It cannot be argued, because the Punans "reverence the Supreme Being as the Kenyahs do" (p. 195), while "it seems probable "that the Punans have merely persisted in the social condition from which the "Kenyahs and other tribes have been raised by the adoption of agriculture and the "practice of building substantial houses" (p. 204). Thus the Punans have the effect—"the conception of a beneficent Supreme Being"—without the conditions under which the conception is thought by our authors to be developed among the Kenyahs and the other prosperous tribes. But, unlike the Kenyahs (and like the Australians), the Punans "do not seem to practise the rite of sacrifice in any form." Again, as to the Australians, if they have "a vestige in the minds of a few individuals of the conception of a Supreme Being" (Mr. Howitt and others, of course, credit some tribes with very much more), that vestige cannot possibly be a survival of a former age in which the ancestors of the Australian tribes worked iron, were agricultural, had substantial houses, and were prosperous under strong chiefs like the Kenyahs. The Australians never were in such a stage of culture, as Mr. Tylor has argued. The Zulus are in that stage, but of the idea of a beneficent Supreme Being it is doubtful whether they retain "a vestige." Finally, the Australians, unlike the Kenyahs, have no departmental deities from among whom they may select and exalt one god to supremacy. For these reasons, among others, the hypothesis of Messrs. Hose and

McDougall does not seem quite adequate, logically ; unless, indeed, they are in a position to prove that the Australians are degenerate from a stage of civilisation marked by metallurgy, agriculture, and a strong despotism, while the Punans have borrowed their Supreme Being from the Kenyahs. Neither statement is hinted at. The hypothesis, therefore, presents us with the effect where the alleged cause never existed, and we have examples in crowds of the alleged cause without the effect. This can hardly be reckoned satisfactory.

As to totemism, our authors conjecture, if I understand them, that the tribes are in a state of arrested development. Individuals discover for themselves *nyarongs*, or special animal protectors, in dreams, but the social conditions and higher religious beliefs are adverse to the development of these "individual totems." The phrase "individual totems" appears to me to be misleading. A totem is, by its essence, the property of a kinship: the *nyarong*, or the American animal *manitou*, is not. Moreover, totemism arose in a stage of culture infinitely lower than that of the Kayans and Kenyahs. They must have passed through that lower stage. Did they fail then to develop totems in that stage, when conditions were favourable, and do they only now make an approach to totemism—an approach constantly checked by the present relatively advanced conditions? *Primâ facie* that theory seems more improbable than the hypothesis that the tribes were once totemistic (though the low Punans are *not*) and retain some vestiges of totemism. It is no objection (as our authors think it is) that the wide distribution of totemism is "wonderful." What is *not* widely distributed? Nothing can be more "wonderful" than the coincidences which our authors report between the Kenyah and Roman systems of augury and auspices. They say, "Unless "it can be shown that the adoption or development of totemism by any people brings "with it immense advantages for them in the struggle for existence, every fresh case "in which the evidence compels us to admit its occurrence, whether in the past or as a "still flourishing institution, can but increase the wonder with which we have to regard "its wide distribution." But the taking of auguries and auspices is of no use, is it, in the struggle for existence? Yet it is wonderfully widely distributed. Staring at a pig's liver is of no use in the struggle for existence, yet the Romans did it, the Kenyahs do it, and the tribes on the Assam frontier use the liver to provoke veridical hallucinations, as in crystal gazing—so I am informed. On the other hand, without totemism one can hardly see how early human society was ever organised at all, though I have not space to develop a theory of the advantages in the struggle for existence which totemism conferred, in a roundabout way, it is true. But even if it did not, things quite useless in the struggle for existence are widely distributed. How is a people aided in that struggle by boycotting its mothers-in-law? I do not mean to affirm that the Kenyahs and Kayans were ever totemistic ; perhaps they were not. The apparent survival of totemism may be due to the other causes pointed out by our authors ; but if they are right the Kayans and Kenyahs are always climbing towards totemism by way of *nyarongs*, and are always checked by their present relatively modern conditions. When these conditions had not yet been developed why should the tribes not have reached totemism? What checked the development of totemism then? Again, the "wonder" of the wide distribution of *nyarongs*, or their equivalents, is great (America, Africa, Australia, Saráwak, at least); yet of what conceivable use are *nyarongs* in the struggle for existence? But out of *nyarongs*—quite as useless in the struggle as totems —were totems evolved, on that hypothesis which has had advocates in America.*

As the Punans are apparently very averse to discussing their beliefs, perhaps they have no Supreme Being after all, and do possess totems. They are too little known, it may be, to afford a basis for arguments on any side. ANDREW LANG.

* For example, in Mr. Hill-Tout's *Origin of Totemism of the Aborigines of British Columbia*. (1901.)

Religion. McDougall.

The Supreme Being and Totems in Saráwak: a Note in reply to Mr. Lang. *By W. McDougall, M.A.* 63

In the above note Mr. Lang has put his finger upon what may well seem to be a sufficient ground for rejecting the view put forward by Dr. Hose and myself as to the origin of the conception of a Supreme Being among the Kenyahs and Kayans of Saráwak. The existence of this belief among the Punans does not seem to us an insuperable objection to our view for the following reason, which we have neglected to state explicitly in our paper :—It has hitherto been possible to come into contact with Punans only through the mediation of Kenyahs or others of the more settled tribes, and these Punans have therefore always been such as have had some amount of friendly intercourse with these more advanced tribes, and whose customs seem to be in part borrowed from the latter, *e.g.*, the partial observance of the cult of the omen-birds, as mentioned in our paper. We think it highly probable, therefore, that the Punan conception of a Supreme Being may also have been borrowed ; but we confess that our knowledge of the Punans is most imperfect, and we would preserve an open mind on this subject in the hope that Dr. Hose will be able to acquire a relatively complete knowledge of the Punans during the next few years.

Mr. Lang's second ground for rejecting our view is that he does not consider the Australians to be a degenerate race. He has advanced this argument in a note in the *Athenæum*, and I have already briefly indicated the nature of our objection to it. It is desirable, therefore, that the essential links of the somewhat complicated chain of argument should be fully stated, thus :—

(1.) The Kenyahs enjoy a social organisation and a system of belief in departmental deities which seem to be such as by reaction on one another may very naturally have led up to the conception of a Supreme Being.

(2.) The Australians also believe in a beneficent Supreme Being.

(3.) The Australians have no such social organisation or departmental deities as the Kenyahs, and, on the whole, seem much more primitive in their mode of life.

(4.) The Australians are not degenerate ;

(5.) Therefore they have not acquired their belief in a Supreme Being in the manner suggested in the case of the Kenyahs.

(6.) The belief in a Supreme Being was either (*a*) independently acquired by one people only and transmitted to others by descent or by borrowing, or (*b*) was independently acquired by different peoples but by the same process of thought in every case ;

(7.) Therefore the Kenyahs did not acquire this belief in the way we have suggested.

Of these links (4) seems to me open to question, but (6) is even more questionable. I presume that Mr. Lang accepts it in the second of the alternate forms, but I can see no grounds for this assumption, whether *a priori* or inductive ; rather it would seem *a priori* probable that the conception of a Supreme Being has developed along different lines among the different peoples that entertain it. An explicit statement of Mr. Lang's views on this point would be highly interesting, for I do not think any such statement occurs in his works.

In the second place, Mr. Lang criticises our conclusion that we may not regard the various animal-superstitions of Saráwak as survivals from a fully-developed totem system. We do not, of course, deny that totemism may have flourished among these people in the remote past, but we deny that the present customs of the tribes afford evidence that will suffice to make this seem in any degree probable. Mr. Lang points out that institutions such as the *nyarong* or the boycotting of mothers-in-law can be of

no greater advantage to a people than the practice of totemism, and implies that our argument as to the antecedent improbability of totemism therefore falls to the ground. I answer that the cases are hardly comparable; in the one class of cases we are dealing with a direct and simple effect of some idea, some mental association or emotional state; in the other case with a complex social system that affects in a very definite and peculiar manner almost every detail of the lives of members of large groups of tribes. As to the argument from the absence of totemism among the Punans we think that much weight may rightly be attached to it, although in the case of the Supreme Being of the Punans we take the opposite view, for it is, from the nature of the case, much easier to feel sure that there is no totemism among Punans than that their Supreme Being is not a borrowed conception; totemism would express itself in the conduct of all individuals of these hunting tribes in a manner hardly to be overlooked by us, while we learn of their Supreme Being only through conversation with a few of the less wild individuals whose ideas are hazy and whose motives are obscure.

W. McDOUGALL.

Egypt. Petrie.

Excavations at Abydos. *By W. M. Flinders Petrie, D.C.L.* 64

The main result of my work for the Egypt Exploration Fund at Abydos, during the past winter, has been the thorough connection of the prehistoric and historic remains. In past years we had explored the prehistoric age, and the system of sequence dates had enabled me to bring the various stages of undated remains into their consecutive order; and in the last two years the royal tombs of the earliest dynasties had yielded material which placed the civilisation of some eighteen reigns before us. Now we have the connection of the two scales, and pass from years into sequence dates without a break.

The ground which furnished these results is a town just outside the temple of Osiris, and within the great *temenos* of Osiris of later age. This town proves to have been started at about the time of the earliest kings of Abydos, three centuries before Mena and the first dynasty; it continued to grow upward by successive strata of rubbish and weathered *débris* through all the history; but the upper parts have been removed by the natives for earth, and so we had only the strata of about 5000–4000 B.C. to deal with. The town was founded on the clean sand edge of the desert; and we have only worked those parts where we could still reach the basal sand, and so have a starting point for measurement. All the things of importance, all the flints, and the pottery, were levelled in inches over the sand and recorded. That the town was wide-spread and grew regularly is shown by the narrow limits of level at which some objects are found; eight examples of a type of flint scraper, which were found over some 200 ft. of ground, were yet all within 15 inches of extreme range of level. Also the pottery shows clear limits for several types.

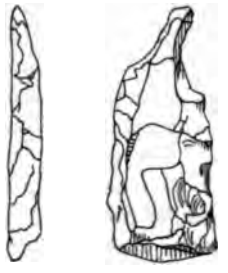
The present result, from comparing the pottery and stone vases with those of the royal tombs and the prehistoric sequence dates, is that we can place as contemporary :—

Sequence Date.	Town Level.	Tomb of King.	Approximate Date.
76	0	—	? 5000 B.C.
77	10	—	—
78	20	Ka	? 4870
79	40	Mena	4715
80	55	Zet	4627
—	70	Den	4584
—	90	Qa	4514
—	110	Perabsen	4373

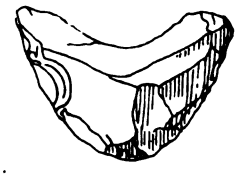
Turning now to the different classes of objects, the pottery is so varied and frequent that it is useless to say anything of it here.

The flint tools are of many types, which I have divided into knives without handles; knives with handles; hoes; scrapers, tailed, round, long, and various; flakes, plain, tipped, worked on edges, rounded, and square; saws; crescent flints; animal figures; and combs. Altogether 327 are levelled and drawn. The working varies from the moderately good, irregular flaking of this age, down to rough chipping; none of it is of the precise and regular work of the prehistoric age. The following are some of the peculiar types :—

1.—TAILED SCRAPER.

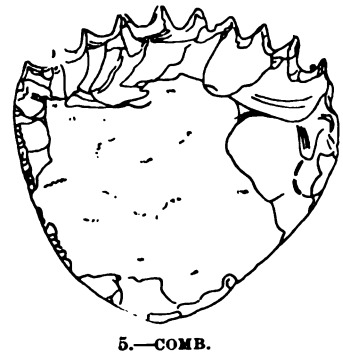


2.—BORER.



4.—CRESCENT.

3.—CROCODILE.

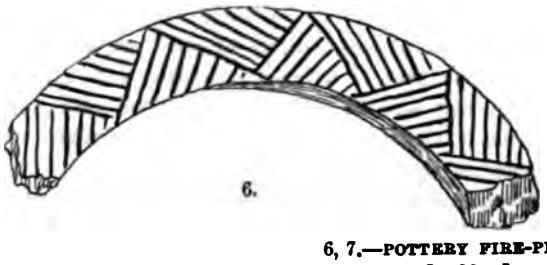


5.—COMB.

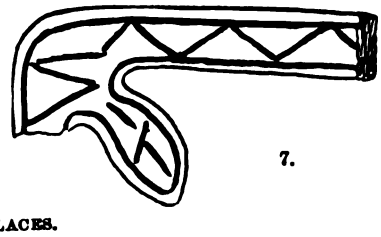
ALL. 1 : 2.

The crocodile is one of three animal figures found here; other examples known were illustrated in MAN, 1902. 14 (Pl. B., 17–19). The crescent flints seem from their associations to have been used as drills, at the end of a stick, for boring soft stones. The combs are hitherto unknown; the teeth are too slender to bear the strain of scraping, and the curvature is too varied for use in combing out materials, or for sawing; possibly they were used in preparing food, for shredding meat, &c. All of these belong to the earlier half of the first dynasty.

Fireplaces were found made in pottery, shaped as a ring, about two feet across and four or five inches high. This ring is decorated with basket patterns (6 and 8), and sometimes shaped as a snake (7), coiled round, with the head turned in toward the fire.

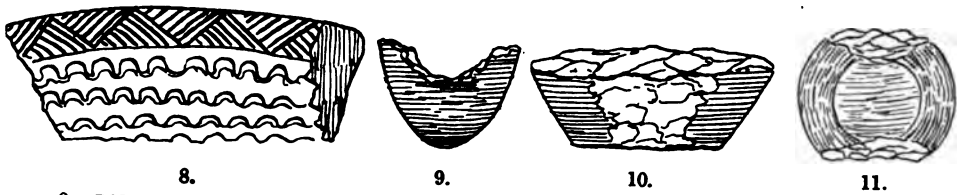


6.



7.

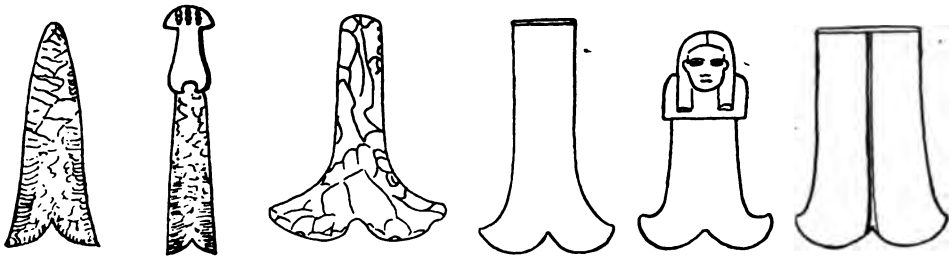
6, 7.—POTTERY FIRE-PLACES.



8. 9. 10. 11.

8.—POTTERY FIRE-PLACE. 9, 10, 11.—STONE VASE GRINDERS.

Stone grinders (9–11) used for making the stone bowls were often found, sometimes in the bed of sand and stone-dust left by the workmen. The history of glazed pottery was confirmed by finding pieces of glazed tile with a ribbed pattern, evidently for surface decoration : the dated pieces found in recent years were still looked on with some doubt as regards age, but these found in unshifted strata of the first dynasty are conclusive. An interesting series of the history of an amulet was completed by a small worked flint. In the prehistoric times forked flint lances are common (see 12). One of these was found mounted in a gold handle (13), not for its original use as a lance but as a cutting implement. Next we have found the small flint figured here (14), of the first dynasty. Then in the sixth dynasty a model appears in sets of funerary furniture (15). In the twelfth dynasty this has dwindled to a small amulet, of carnelian, with gold handle (16). And in the twenty-sixth dynasty this amulet, named *pesh-ken* or "the cutting tool," is described as used for the ceremony of opening the mouth of the dead that he may speak, and is placed commonly on the mummies (17), modified in form by its similarity to two other amulets of the double feather.



12. 13. 14. 15. 16. 17.

1 : 6. 6000 B.C.? 1 : 10. 5500 B.C.? 1 : 2. 4700 B.C. 1 : 2. 3500 B.C. 1 : 1. 2500 B.C. 1 : 1. 500 B.C.

An important group of eleven unplundered tombs of the first dynasty was found in the town. They contain the bodies contracted and buried like those of the prehistoric people, and around the body a number of stone and pottery vases, varying up to 22 of stone and 50 of pottery. Each grave was planned, and will be set up in original order in a museum.

Of later times there was found in this town, and in the temple of Osiris, much inscribed and sculptured stone, from the fifth to the thirtieth dynasty, of historical interest ; and in a part of the great cemetery many large burials in inscribed stone sarcophagi were opened, serving to show the arrangement of funeral furniture and amulets in the late times.

Beside this work a larger part of the excavation was on an enormous royal tomb, the largest yet known, and its surrounding tombs. It had been plundered in Roman times ; but we hope to recover some monuments in the hundreds of tons of *débris* that have yet to be searched.

The work of the Egyptian Research Account was entirely on the temple of King Sety at Abydos. Mr. Caulfeild's excavations showed a large enclosure wall, and exit to the royal tombs on the desert behind ; and also an enormous inscribed tomb some hundreds of feet in length which still awaits clearing and copying. Mr. Christie was engaged in drawing the archæological detail of the temple sculptures.

The whole of the results will be issued in July in the annual volumes of the Egypt Exploration Fund and the Egyptian Research Account.

Malay. Westlake.

Malay Divining Rods: A Note on Dr. Tylor's Paper (Man, 1902. 40).

65

By E. Westlake, F.G.S.

My attention has been drawn to an article by Dr. Tylor (MAN, 1902. 40, Pl. D.) on *Malay Divining Rods*, the details of which are essentially those of the so-called "possessed" rods from other parts of the old world. Towards the conclusion of his article Dr. Tylor leaves the folklore point of view to discuss the actual success of the rod, its *modus operandi*, and its reason or lack of reason. With his remark that the rod has no physical relation with the object sought for, and only follows the seeker's state of mind and body, I fully concur; but when he proceeds to characterise these states as abnormal, in the sense of being less than sane, this seems to me to be possibly a misapprehension. In psychology things are not always what they seem, as when Mark Twain thought he must have a great mind because it took him so long to make it up. The water-finder, having to make up his mind about water, gets his rod to make it up for him. This is the practical use of the rod. It can, of course, only make up the mind the dowser has; and what this is, and how the ideas reach him, is what the psychologist has to find out.

In the hands of an experienced water-finder the rod doubtless delivers an expert judgment, which (as the old judge said) will probably be right, whereas the reasons for it would probably be wrong. So while the dowser does not of course gain knowledge by taking hold of a twig, he may conceivably gain guidance, as Socrates said he gained guidance from his inner voice about matters already known to him. If genius is definable as automatism of the higher faculties, an automatic judgment that proves to be correct seems to me more likely to be akin to genius than to insanity.

Other cases, which possibly suggest more than expert knowledge, are those in which the dowser was obviously not an expert and knew nothing about springs, as, *e.g.*, the springs Gabriel de Mortillet describes himself as finding by means of a rod when a youth—for the late eminent professor was himself a successful dowser and published a small book on the subject*—or those, again, wherein the expert could not have judged from surface signs, because there were none to judge from. A few of the latter I have described in an appendix to Prof. Barrett's last paper on the rod (*Proceedings of the Society for Psychical Research*, Part 38).

Dr. Tylor remarks that "in the civilised world the magical thief-finder has proved an utter failure." But a thing must be known to have been tried more or less extensively before it can be said to have failed, and in the whole of divining rod literature I know only of two cases of the rod being used in Europe for tracing thieves.† There is also a detailed account of finding a thief in Bengal, which presents no irrational or inexplicable features (*Chambers' Journal* for January, 1856).‡ The Count de Gasparin § would explain Jacques Aymar's case as his unconscious perception of sensible signs; and conversely the feats of the Argentine *Rastreador* described by Sarmiento‖ might be facilitated by the use of a rod. The particular purposes for which "magic" is used seem very much a matter of fashion. The rod is not used to predict the weather, but one does not thence infer its failure for the purpose. Automatism only began to be studied in the last century, and of its limits we know next to nothing. The phantasies of magic have arisen from popular misinterpretations of actual psychological phenomena, and to reach their true theory requires not merely their sympathetic record as folklore, but skilled experiment as in the other sciences.

E. WESTLAKE.

* *Histoire de L'Hydroscopie et de la baquette divinatoire.* 88 pp. Chambéry, 1849.

† Accounts of Aymar, 1692 *et seq.* Dufour: *Revue savoisienne*, 1862, avril 15, pp. 34-35. Annecy.

‡ Authenticated by the publishers: see Rev. R. S. Maitland, *False Worship*, p. 330.

§ Gasparin, A. E. de: *Tables Tournantes*, tom. ii, pp. 124–140. Paris, 1855.

‖ Sarmiento: *Civilizacion y Barbarie*, pp. 37–41. Santiago, 1851.

Cyprus. Walters.

Note on Certain Antiquities from Cyprus in the British Museum. 66

Communicated by H. B. Walters, M.A., F.S.A.

The Keeper of the Department of Greek and Roman Antiquities in the British Museum desires that it should be made known that during the re-arrangement of the Cyprus gold ornaments, &c. now in progress, the scarab from Enkomi (*Excavations at Enkomi*, Plate IV., No. 760), which had been temporarily mislaid, has been found; and that the cylinder of late style from Curium (tomb 43), to which reference was made in MAN, 1901. 139, and which has also been for some time missing, was found among a series of cylinders from Enkomi. Is is hoped that it will be possible before long to publish this cylinder.

Mexico. Dalton.

Further Note on Reproductions of Nahua Manuscripts. *By O. M. Dalton, M.A., F.S.A.* 67

In a note on "Reproductions of Nahua Manuscripts" published in MAN, 1902. 54, I omitted to mention that Dr. Seler's Commentary on the *Tonalamatl* in Paris has been translated into English by Professor A. H. Keane, to whom the English version of the same author's commentary on the Codex Fejérvary-Mayer at Liverpool is also due. These commentaries are, alike from a linguistic and ethnological point of view, among the most important of recent additions to our knowledge of ancient American civilisation, and it is therefore a peculiar advantage to the English student that they should be introduced to his notice by so able an interpreter. Professor Keane, by making the pages of his version exactly coincide with those of the German edition, so that references to the one book are also valid for the other, has set an admirable, if arduous, example to other translators.

O. M. DALTON.

REVIEWS.

Art. Hirn.

The Origins of Art. By Yrjö Hirn. London: Macmillan, 1900. 23×14, pp. xi-331. 10*s.* net. 68

This is an excellent and valuable work, which will repay all who read it through. The author's command of the English tongue is not a little remarkable; the knowledge which he brings to his undertaking is wide and full, whilst his loyalty to other workers and his graciousness in controversy are beyond praise.

His thesis is not likely to be entirely accepted by all his readers without some hesitation and demur. He attacks, for instance, Darwin's doctrine of sexual selection with much force and reason, especially on the ground that it is absurdly anthropomorphic to attribute to the hen an æsthetic judgment. She is too low in the animal scale to be able to discriminate between rival shows; and, at any rate, the gesture and song, the colour and form developed in the cock are often ugly and inharmonious. To this an objector might reply, first, that there can be no dispute in matters of taste; it is the hen and not the man that has to be charmed. And then, that Darwin must be taken to have meant, what Darwinians certainly mean, that the hen's choice in these matters is hedonic—as, indeed, is our own—and that the display of the male bird diffuses through her organism a thrill of pleasure and kindles in particular the erotic emotion which influences her in choosing a mate.

The author justly points out (p. 5) that art can no longer be deduced from general philosophical and metaphysical principles, but must be studied by the methods of inductive psychology as a human activity. His endeavour is to prove (p. 302) that the art impulse is an outcome of the tendency of every feeling-state to exteriorise itself, the

effect of such a manifestation being to heighten pleasure and to relieve pain. The artist finds that he can gain such enhancement or relief not merely by giving expression to his feelings, but also by arousing a like feeling in others. Hence comes his desire to transmit his moods to an external audience and to endow his artistic products with permanence.

This perpetuation can be explained (p. 303) only by reference to the enhancing and relieving effects which man has experienced as the result of emotional transmission.

The author lays much stress on the primordial importance of rhythm in movement and in music (p. 87) and of those regular recurrences of lines and figures in formative arts that may be called rhythm in material (p. 91); but he derives them all from utilitarian sources (p. 258). As soon as the expression is fixed in rhythmical form, its contagious power is incalculably increased. By its incessant and regular return, rhythm arrests the æsthetic attention and facilitates the transmission of feeling (pp. 275, 89).

Beauty, a combination of grace and harmony, is interpreted as an object of human longing and a source of human enjoyment (p. 5); yet utilitarian production can develop grace and form (p. 275). Hence the assumption is not permissible that any work or performance which can be proved to serve a utilitarian purpose must on that account be rejected as a genuine work of art (p. 7). The dances, the poems, the formative arts of savages have a general usefulness, but they possess unquestionable æsthetic value also (p. 12). Nevertheless, as regards a dance performance, it is impossible to decide whether its effect on the spectators is the result of the movements themselves, as originating an imitative impulse, or is caused by the rhythm which regulates them (p. 90). Imitation has a fundamental importance for the development of human culture (p. 74). The æsthetic activities can be understood and explained only by reference to this universal tendency to imitate (p. 75).

Play and art have much in common (p. 29). By considering artistic activity as a kind of play we can account for its attractiveness even when no "surplus of vigour" can be shown to exist (p. 27). The aim of play is attained when excessive energy is discharged; the function of art, on the contrary, outlasts the act of production, and the play impulse can account for neither beauty nor rhythm. Equally inadequate are the explanations of art as "a self-exhibiting impulse" and as "the instinct to attract by pleasing" (p. 29). Though it may be true that without a public no art would ever have appeared (p. 25), yet the genuine artist does not make it his sole object to please (pp. 24, 25).

The simplest forms of art, such as a lyrical dance or a lyrical song, are direct outbursts of emotional pressure, which if unrelieved would prove dangerous to the system (p. 144). Pleasure nurtures itself by expression, pain is increased as inhibition spreads (p. 41). Art production fulfils with great efficacy a relieving and cathartic mission (p. 70). The most deep-seated motive of all human activity is to enhance pleasure or to relieve pain, by the expression of over-mastering feeling. It is the fundamental hypothesis of the present work that art is better able than any other kind of mental function to serve and satisfy these requirements (p. 73); to give complete and effective relief from emotional pressure (p. 105).

On such matters as these the opinion of the artist himself is of little importance (p. 114), for to those who teach or learn an executive art it must unavoidably seem to be chiefly a power and a skill (p. 135). The element of technical perfection is, indeed, the indispensable condition for achieving an embodied feeling (p. 139).

The true artist is compelled to seek in æsthetic production compensation for the deficiencies of life, and the sense of liberation that follows the attainment of artistic form, relieves his overwhelming and inharmonious excitement (p. 113). The true artist is the man who has found means to enhance his feelings of pleasure, or to relieve those of pain, and who seeks to arouse kindred feelings in others, in an ever-widening sphere, beyond

the limitations of time and space (pp. 302, 90, 84). Hence he is constrained to seek a response to his emotion from a real, or from a fictitious, public (p. 99). In artistic solitude, as in poetic soliloquy, the *ego* becomes a substitute for an external audience: the creator exists also as his own spectator (p. 100).

Any artistic representation of nature serves the purpose of perpetuating a feeling-state (p. 123). The artist's primary impulse is emotional, and aims at making a particular mood independent of the accidental and individual conditions under which it arose, so as to impress on spectators this concentrated and isolated view (p. 125).

Professor Hirn's chapters on Historical Art, Erotic Art, Art and Magic, are of especial interest. In pictorial as well as in dramatic art the purely commemorative purpose belongs, probably, to the later stages of culture (p. 174). Tribal, like individual memory, is dependent for its development on favourable external influences that stimulate the attention (p. 178). Bygone events are preserved in history and art chiefly for their effect in enhancing national pride. Of pride, history has been born. The great monuments are all records of glory. It is this emotional element that makes history an art (p. 181).

The aim of religious instruction has been to convey with the utmost distinctness a thought-content; and this has influenced artistic representations of life and nature; though when it first began to do so, there are no means of ascertaining (pp. 183, 184).

Sexual selection is one cause, but it is not the only cause, of erotic art (p. 242). The strong emotional tension that accompanies pairing demands some method of relief by sound or movement; and those manifestations will revive, by association, the pleasurable feelings with which they have been connected (p. 243). All forms of art have their unity in the essential unity of all feeling (p. 139).

The chief non-æsthetic factors that have favoured the development of art are the utilitarian motives to give information; to propitiate (that is, to flatter the senses by a display of beauty); to stimulate (that is, to heighten vital energy); and to work magic (p. 301).

Such, then, in brief, and mainly in Professor Hirn's own words, are his persuasive doctrines of the origins of art. In considering the value of an explanation it is useful to compare it with an alternative. The human organism, reacting upon its environment by movements of approach towards the beneficial or of aggression against the injurious, finds that the advantage gained, increased good or lessened evil, is associated with action, and a pleasurable sense of power is originated. The love of power thus becomes a fundamental impulse; not strength nor skill, but their exercise; power over one's limbs and organs; over one's words and modes of speech; over the elements of music and the symbols of thought; over material, the pliant osier, the plastic clay, the rigid stone, the luminous pigment; and over other living creatures, in strife, in games, in intellect, in art. The child who plays in solitude is a despot to her dolls, is a martinet to his tin-soldiers; "make-believe" is always imperious.

An artist is one who has by nature, or who seeks to acquire by practice, a special power over his limbs or organs, and over material, and this power he cultivates that he may be able to influence other men, to excite in them the same emotion that moves himself. His autotely is ever merging into socialism. His art impulse is the love of power to reproduce his own feelings in others, but a part of his anticipated reward is an enchancement of his own emotion and not a catharsis. It is the inventor, whether in art, physics, or mathematics, who after prolonged gestation and the final pangs of birth, experiences a cathartic joy when his conception, in a concrete form, is at last born into the world. But this is an intellectual rather than an emotional relief; it is the thought-strain that suddenly comes to an end.

If there are men, whether potters, painters, or poets, who make things without a love of dominion, first over material, and then over the human heart, they are workmen and not artists.

If there are men who, like misers, fill their studio with hidden manuscripts and sculpture, then it is sweet to them to hold these means of influence in secret possession.

The musician whose audience is inattentive to him loses all interest in his own performance. But he is roused to an ecstasy of delight when his hearers are entranced, when his *bâton* not only sways the orchestra but rules the assembly. The common aim of him and them is to redouble and not to discharge emotion; to fill the cup of their longing. And if, as a result, their attention is diverted from painful thoughts or feelings, certainly that is "a relief," but the word is ambiguous, and in this case has a non-cathartic meaning.

Mr. Stout shows* that the pleasures of sense, after satiety has passed away, give rise to a craving for renewed stimulation. If these pleasures are interrupted before satiety is reached, a tension is experienced, "an unsatisfied conation." Is Professor Hirn's cathartic effect, after all, the same thing as Mr. Stout's attainment of satiety?

HY. COLLEY MARCH.

Technology. **White.**

How to Make Baskets. By Mary White. New York: Doubleday, Page & Co. 1901. **69**

Although this little book is intended for the instruction of children and amateurs in the art of basketry it has a certain utility for those who are interested in the subject from our point of view. In order to study the comparative technique of basketry some practical knowledge is necessary, and this can be acquired from the book. The concluding chapter on "What the Basket means to the Indian," by Neltje Blanchan, is a reprint of an article in a popular magazine, although this fact is not stated in the book. The subject is a fascinating one, and with a little more method the chapter could have been made of real value. Those who desire further information about the technique of this art will find it in the three following admirable papers:—*Basket-Work of the North American Aborigines*, by Otis T. Mason; *Report, Smithsonian Institution*, 1883–84 [1890], Pt. II., pp. 291–306, plates I.—LXIV.; *The Technic of Aboriginal American Basketry*, by Otis T. Mason; *American Anthropologist*, N.S. III., 1901, p. 109; *String, and other Forms of Strand: Basketry, etc.*, by Walter E. Roth; *North Queensland Ethnography, Bulletin* No. 1, January 1901. Home Secretary's Department, Brisbane, C.A.N.—1901.

A. C. HADDON.

France: Prehistoric. **Worsfold.**

"*The French Stonehenge*": *An Account of the Principal Megalithic Remains in the Morbihan Archipelago.* By T. Cato Worsfold, F.R. Hist. Soc., F.R.S.L. London: Bemrose & Sons, Ltd., 1902. 8vo. 44 pp. Plates 17 pp. Price 5*s*. **70**

Under this title Mr. T. Cato Worsfold gives a brief account of the principal megalithic remains round Carnac and Locmariaker, with occasional references to Avebury, Stonehenge, &c., which, as a conveniently-arranged statement of facts with some very good illustrations, will be useful to those who are beginning to collect information and material upon the subject. There is not much theorising in the book, and what there is the student will do well to ignore. Such suggestions as that "the "great stones at Avebury may have been set up as a memorial to the Saxons and Danes "who perished in the battle of Kennet, A.D. 1006," are not worthy of the 20th century, and it is difficult to believe that anyone who had seen and studied the details of construction of Gavr Inis, New Grange, and Maeshowe could suppose that they had all been "designed and carried out by the same master hand." The height of the supporting stones of the "Dol ar Marchant" is stated at 16 feet, which is probably a misprint for 6.

A. L. L.

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* *Analytic Psychology*, Vol. II., 304.

PROCEEDINGS OF SOCIETIES.

Proceedings. **Folklore Society.**

Ordinary Meeting, 23*rd April*, 1902. Mr. W. Crooke read a paper on *Bride-lifting*. He dealt first with the rite practised in the North of England of lifting **71** the bride after the marriage ceremony over a stone placed in the church porch, and known as the "Petting" or "Pettin Stone." This, considered in the light of other ceremonies of the same character, was classed as a fertility charm. Secondly, the well-known rite of lifting the bride over the threshold was regarded as of similar origin, though in some cases the idea may have been that the bride, who—for instance, being, under the law of exogamy, a stranger to the new family—was regarded as taboo. In this connection the speculations of Mr. Crawley in his recent book, *The Mystic Rose*, were considered. Lastly, came the cases of lifting of women at certain periodical festivals, especially at the New Year, Easter, and harvest. These were regarded as survivals of the saturnalia which so commonly accompany the seasons of sowing and harvest.

The paper will be published in an early number of *Folklore*.

Proceedings. **Anthropological Institute.**

Ordinary Meeting, 29th April, 1902. Dr. A. C. Haddon, F.R.S., President. **72**

The president reported the decision of the council to send a congratulatory letter to Professor Baldwin Spencer and Mr. Gillen on the safe return of the Baldwin-Spencer expedition to Central Australia.

The Secretary read extracts from a letter from Mr. H. H. Risley, Census Commissioner of India.

The following exhibits were laid on the table: A surgical knife, Queensland, presented to the Institute by Mrs. Fisher, of Yepoon, Queensland; a collection of photographs of natives of Australia and South Africa, presented by the Colonial Office; a photograph of an object of unknown use from Queensland, exhibited by Mr. R. D. Darbishire.

Mr. H. Balfour read a paper on *The Goura, the Musical Instrument of the Bushmen and Hottentots*. The paper was discussed by the president, Mr. C. H. Read, Mr. Walsh, Dr. Garson, and Mr. Hutchinson.

Ordinary Meeting, 13th May 1902. Dr. A. C. Haddon, F.R.S., President. The election was announced of Sir Henry Evan Murchison James, K.C.I.E., C.S.I., Hon. Robert Finnemore, Dr. P. G. Edgar, Dr. H. A. Haviland, and Mr. C. Hayavadana Rao, as ordinary Fellows of the Institute.

The following exhibits were laid on the table: Dolls from the Egyptian Soudan, exhibited by Dr. Gates; a series of earrings of turtle shell collected by Mr. M. Dauncey from the Koiari tribe of the central district of New Guinea, exhibited by the president.

Mr. A. L. Lewis exhibited lantern slides of rude stone monuments on Bodmin Moor, Cornwall.

Mr. T. H. Holland read a paper on *The Kanets of Kulu and Lahoul*, illustrated by lantern slides. The paper was discussed by Messrs. Gray, Shrubsall, Garson, Seligmann, and Myres.

Ordinary Meeting, 27th May, 1902. Dr. A. C. Haddon, F.R.S., President. The election was announced of Dr. Windle, F.R.S., and Mr. Cecil Boden Kloss as ordinary Fellows of the Institute.

Mr. D. G. Hogarth read a paper on his *Excavations in the Dictæan Cave and at Zakro in Crete*.

Professor Boyd Dawkins read a paper on *The Animal Remains found in the Dictæan Cave and the Skulls from Cave Burials at Zakro in Crete*.

The papers were discussed by Prof. W. M. Flinders Petrie, Mr. Pusey, Mr. Gowland, Mr. Myres, and Dr. Myers.

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7

IMPLEMENTS AND ORNAMENTS OF THE YAHGANS OF FUEGIA.

IN THE COLLECTION OF THE SOUTH AMERICAN MISSIONARY SOCIETY.

NOS. 1–6 ABOUT ½ SCALE; NO. 7 ABOUT ⅛ SCALE.

ORIGINAL ARTICLES.

South America. With Plate G. Middleton: Myres.

Implements and Ornaments of the Yahgans of Fuegia: with Notes by R. Morton Middleton. *Communicated by J. L. Myres, M.A., F.S.A., Secretary of the Anthropological Institute.* **73**

The objects represented in Plate G. are the handiwork of the Yahgans of South America. The Yahgans are a Fuegian fishing tribe who occupy the islands south of the Beagle Channel in lat. 55°–56° S. and long. 67°–69° W. They are believed to be the most southerly group of human beings in the world, and the stress of their inclement climate and of recent contact with civilisation have reduced them now to less than 200 in number. At the time of their discovery they appear to have been unacquainted with the use of metal and even with the art of working in stone; and they are still wholly dependent upon the outer world for all but the barest necessaries of life.

The objects shown in the plate are in the collection of the South American Missionary Society, Clifford's Inn, Fleet Street, E.C., and may be briefly described as follows:—

1. Necklace composed of segments of the *radius* and *ulna* of a shag or cormorant (*Phalacrocorax magellanicus*), decorated with incised lines. The pendants are composed each of four segments of the *humerus* of the same bird, strung on parallel threads. Diameter, as shown, 5½ inches.

2. A necklace of segments of the *trachea* of the wild swan (*Cygnus nigricollis*, Gm.). This type of necklace is rare and much prized. Diameter, as shown, about 8 inches.

3. An aged specimen of mussel-shell (*Mytilus magellanicus*, Chemnitz), for use as a tool for cutting and polishing. Size, 4¾ by 2⅜ inches.

4. Another specimen of the same shell, chipped into shape. The rounded end is ground down to a hard sharp edge, for cutting bone and similar substances. Length, 4¼ inches.

5. Another specimen of the same shell, lashed, for convenience of handling, by means of a carefully plaited cord of whale's sinew, to an unwashed beach-pebble of a common variety of andesite. With this tool, the Yahgans make smooth and beautifully cut spear-heads, harpoons, &c., from the bones of whales, and these are the only cutting tools which are of indigenous make. Length over all, 9 inches.

6. Another tool like No. 5, with blade of shell lashed with a leather thong to an unworked pebble. Length, 7 inches.

7. A very fine harpoon head made with tools like Nos. 5 and 6, as above described, from a bone of a whale. Length 24 inches.

The interest of the above series will be evident at once, for they illustrate a stage in the scale of culture in which not merely the art of metal working, but even of stone-working, has not yet been acquired at all. Bone and shell are the only hard substances on which a point or a cutting edge can as yet be fashioned, and stone is only used at all when it occurs in a shape which is naturally adapted for handling; and even then only for the haft of the implement, in the absence of suitable wood or bone, and not for the blade. The Yahgans, in fact, might fairly be described as persisting in a "Bone Age" culture antecedent to the Age of Stone. J. L. MYRES.

India. Risley.

Note on Some Indian Tatu-Marks. *By H. H. Risley, C.I.E., Director of Ethnography for India.* **74**

It may be of interest to readers of MAN and may suggest further lines of inquiry if I offer a few suggestions as to the probable significance of the tatu-patterns figured by

my friend Mr. Fawcett in his paper on *The Dômbs of Jeypur* (MAN, 1901. 29). I agree with him in thinking that the Dômbs of whom he writes are akin to the Pânôs or Pâns who live in a sort of ghetto outside the Khond villages, weave cloth, and cultivate on the *métayer* system for their Khond landlords. In old times the Pâns of the Khond country used to kidnap and otherwise procure children for the *Meria* sacrifice, and were taxed with selling their own offspring for this ghastly purpose. These helot Pâns are, however, only a fraction of the entire Pân community, which numbered in the 1891 Census 341,740, nearly all in Orissa and the adjacent district of Midnapur. The evidence of the tatu-marks, as I shall show below, enables us to connect the Dômbs or Dômbas of Madras (74,249 in 1891) not only with the Pâns of Orissa but also with the Dôms* of Upper India, numbering 1,257,826 and distributed as follows :—

Bengal	453,359
North-West Provinces	331,242
Assam	205,053
Kashmir	130,985
Punjab	68,971
Central Provinces	68,216

In the census statistics of 1891 the Dôms are thrown in with the sweepers (Haris, Mehtars, Chuhras, &c.), an arrangement which obscures the essential differences between the two groups. Dôms handle dead bodies freely, act as hangmen, and assist at *post-mortem* examinations, but will have nothing to do with nightsoil. Sweepers remove nightsoil, but will not touch a corpse. Each looks down upon the degrading occupation of the other, and claims a superior status on this account. In large Indian cities both castes discharge important duties, and the sweepers in particular have flourished exceedingly since sanitation came into fashion. When plague appeared in Calcutta in 1898, some miscreants got up a scare about inoculation and stampeded some 100,000 people within a few days. Had the sweepers joined the stampede, as they threatened to do, about 60,000 privies, which have no connection with the sewers and must be cleaned daily by hand, would have been left *in statu quo*, and the city would have become uninhabitable in a week. About the same time one of the Dôms employed in the hospitals got pricked by a bit of bone while assisting at a plague *post mortem* and died of plague. As Dôms are immune from ordinary blood poisoning, and handle dissected bodies in the most careless fashion, this disaster gave the fraternity a great fright, and their pay had to be raised in consideration of the risk they ran. The consequences of a strike would have been appalling. In the country districts Dôms are weavers of baskets and mats, which they regard as their original occupation ; makers of discordant music at marriages and festivals ; and cultivators. They also superintend the burning of the dead and charge a fee varying with the rank and circumstances of the deceased for the wood and straw which they supply for this purpose. The Magahiya sub-caste in Behar are professional burglars. The religious aspect of their vocation will be mentioned below.

With this sketch of the large community we are concerned with, let us now turn to the tatu-marks, the representations of which, given in MAN, 1901. 29, are reproduced herewith.

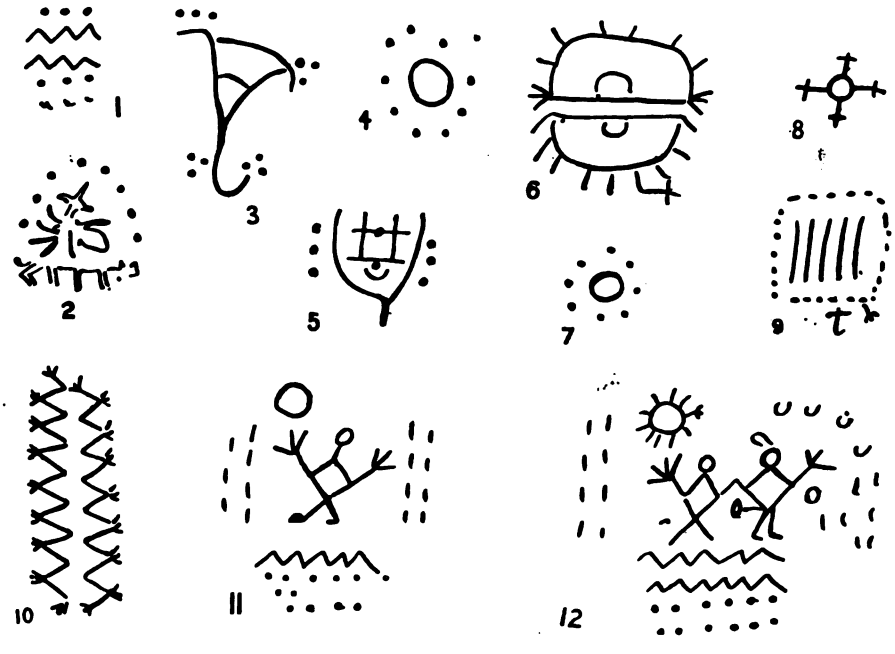
If No. 1 is a scorpion it is difficult to see how No. 3 can represent the same creature, for there is no sort of resemblance between the two sets of marks. But No. 1 is certainly not a scorpion. The wavy lines in the middle represent water in the conventional manner which may be observed in the borders of some Indian carpets. The dots at either side depict what passes for a garden in India, a wilderness of trees planted in straight lines with no attempt at grouping or effect.

* The usual spelling is Dôm. Dômb or Dômba is a South Indian variant.

No. 2 may be "flowers," but this is just the sort of random explanation that people are apt to give of things which they do not understand. May it not be a funeral pyre, with the five logs sticking out at one end and the corpse's head at the other, while the dots represent the relations standing round ?

No. 3 is a rather indifferent scorpion, and compares very badly with a most realistic tatu of the same animal which has come to me from Gujrat in the Punjab. I suggest as an alternative solution that No. 3 represents the curved knife used by the Dôms in making baskets. The handle, of course, is clumsy, but handles are apt to be so in India, where symmetry is at a discount and nothing is made to fit.

No. 5 is the katár or Indian dagger, which is held by the crossbar inside the flanges of the handle, the stroke being delivered from the shoulder as in boxing. The connection of the katár with the Dôms is obscure. It may arise from their burglarious tendencies, or from their employment as village watchmen, though the katâr as figured



here is rather a fancy weapon, less adapted for rough work than the sword, spear, or long iron-bound staff usually carried by the chaukidar. In Behar the name katâri is applied to the curved knife used in basket making. It is curious that one of the exogamous sections of the Bâbhans, a high landowning caste in Behar, bears the name Domkatâr and ranks low, so that members of the other sections, though they will marry Domkatâr women, will not give their daughters to Domkatâr men.

No. 6 seems to be an insect of some kind cut in half through the middle. The Pâns of the Orissa hills, with whom Mr. Fawcett identifies the Dôms, have the wood-louse as one of their totems, and perhaps this may be some kindred creature. It has too many legs to be a spider, which is a fairly common tatu-mark in Upper India. Nor are the legs long enough ; a spider conventionalised into a tatu-mark would probably be all legs. That a totem should be tatued on the body is an intelligible and widespread practice, and would explain the wood-louse. If the spider is not a totem, as for all I know it may be, its use as a tatu-mark may be a case of imitative magic which, as Mr. Frazer tells us, seeks to transfer to man the useful qualities which some animals are supposed to possess. Thus some Bechuanas wear a certain insect, mutilated but living, because "being very tenacious of life it will make them difficult to kill" ; and

certain people of the Malay country think that if you rub the ashes of roasted spider on your fingers when you play the lute this will make them "as lithe and nimble as the spider's legs." Or again, if the animal is merely poisonous and disagreeable it may be worn as a tatu to curry favour with it, on the principle which leads people to speak respectfully of snakes and tigers, even when they are dead.

No. 9 appears to me to represent the grim worship which I have elsewhere (*Tribes and Castes of Bengal*, i. 247) described as characteristic of the Magahiya Dômb of Behar.

Systematic robbery is so far a recognised mode of life among the Magahiya Dôms that it has impressed itself on their religion, and a distinct ritual is ordained for observance by those who go forth to commit a burglary. The object of veneration on these occasions is Sansâri Mâi, whom some hold to be a form of Kâli, but who seems rather to be the Earth-Mother known to most primitive religions. No image, not even the usual lump of clay, is set up to represent the goddess. A circle one span and four fingers in diameter is drawn on the ground and smeared smooth with cowdung. Squatting in front of this the worshipper gashes his left arm with the curved Dôm knife (*Katâri*), and daubs five streaks of blood with his finger in the centre of the circle, praying in a low voice that dark night may aid his designs, that his booty may be ample, and that he and his gang may escape detection.

"Labra movet metuens andiri : pulchra Laverna,
Da mihi fallere, da justo sanctoque videri,
Noctem peccatis et fraudibus objice nubem."

The whole of this business was acted before me in the Buxar Central Jail by a number of Magahiya Dôms undergoing sentence there. Several of them had their left arms scarred from the shoulder to the wrist by assiduous worship of the tribal Laverna. In the tatu-picture the five streaks of blood and the enclosed space are clearly shown, and the curved knife used to draw blood is depicted lying in front of the circle, which, I admit, is not so circular as it might be.

No. 10 it is suggested might be a centipede, one of the totems of the Pâns. It might be almost anything.

Nos. 11 and 12 represent a classical scene in Dôm folk-lore, the story of King Haris-Chandra, who was so generous that he gave all he had to the poor and sold himself to a Dôm at Benares, who employed him to watch his cremation ground at night. While he was thus engaged, his wife, who had also been sold for charitable purposes, came to burn the body of her son. She had no money to pay her fees, and Haris-Chandra, not knowing her in the darkness, turned her away. Fortunately the sun rose ; mutual recognition followed ; the victims of promiscuous largesse were at once remarried, and Vishnu intervened to restore the son to life. Tatu No. 11 shows Haris-Chandra watching the burning ground by moonlight ; the wavy line is the Ganges ; the dots are the trees on the other side ; the strokes on either side of the king are the logs of wood which he is guarding Wood is scarce at Benares and thieves are plentiful. In No. 12 we see the sun rising, its first ray marked with a sort of fork, and the meeting of the king and queen.

Now what bearing have these tatu marks on the various explanations of tatuing that one finds in the literature of the subject ? It has been held by various authorities that tatuing is mere ornament signifying nothing, or at most intended to frighten the enemy ; that it indicates the tribe and family of the tatued by displaying their totems ; that it records success in battle, the loss of near relatives, and similar personal occurrences ; and that it is connected with the attainment of sexual maturity by males and females, so that the former are tatued as a sign of their promotion to the rank of warriors entitled to bear arms, while the latter are not accorded this distinction until they have justified their existence by getting a husband or bearing a child. The most recent

writer on the subject, Joest, is particularly strong on denying to the custom any religious or mystical significance and scoffs at Waitz-Gerland's explanation as an "orgy of fantasy." His conclusion, independently arrived at by Westermarck, is that the main object of tatuing on the part of either males or females is to enhance their attractions in the eyes of the opposite sex and thus to stimulate desire. Tatuing, in this view, is merely an incident of courtship and has nothing to do with religion or totems, while its association with puberty arises solely from the fact that savage people set about their wooing betimes.

I have no intention at present of entering the field with a new theory. We have only just now begun to investigate the subject in India; the data collected are as yet scanty, the custom itself seems to be dying out, and our inquiries may come to nothing. Nevertheless, these Dôm tatu-marks seem, so far as they go, to support the Waitz-Gerland hypothesis of a religious or quasi-religious origin rather than the matter of fact view put forward by Westermarck and Joest. In the first place, they are not ornamental in themselves. The argument, I admit, does not come to much, as we have no means of gauging the standard of taste among the Dôms. But the designs certainly compare most unfavourably with the simplest type of line-tatu figured in Joest's elaborate book. Secondly, if I have identified them correctly, four out of the twelve designs are pretty closely related to the religion and mythology of the tribe; two are totems and two have reference to their traditional avocations. Surely there is more in this than mere ornament.

H. H. RISLEY.

Totemism.

Powell.

An American View of Totemism. *By J. W. Powell, Director of the Bureau of American Ethnology, Washington.* (*Cf.* MAN, 1902. 84. *below.*) **75**

In this country we usually call the ancient inhabitants of America "Indians," but the term is a little ambiguous in Europe, and we are beginning to realise that a better term may be employed, so the term *Amerinds* is sometimes used. A group of Amerind tribes occupying a limited part of the Dominion of Canada and the United States are known as Algonquians; they belong to a distinct linguistic stock in which many languages are spoken. Among these tribes the word "totem" or its variant is used, and these are the languages from which the word comes. The word is derived from a root which signifies clay. Among the Algonquian tribes clay was used to paint the face and body with the heraldic devices of a group of persons. Should an Algonquian Indian ask another, "What is your clay?" that is, what is your colour, or what is your escutcheon, or what is your heraldic device, or what is your coat-of-arms? he would use to express this idea the term *totem*. The group is composed of such persons as reckon consanguineal kinship only through the mother; thus the mother and her brothers and sisters, and their mother with her brothers and sisters, belong to the group, and the kinship may be reckoned in the same manner through an indefinite number of generations. This group we call a *clan*, but the Algonquians call it a *totem*, thus clan and totem are synonymous.

In most of the tribes of North America the clan is the group next higher to that of the family. There are other tribes in which the clan group is replaced by what we call the *gentile* group. This group is like that discovered among the Latin tribes, and embraces those persons who reckon kinship through the father, with his brothers and sisters, including their father and his brothers and sisters. Thus the mother's group and the grandmother's group are excluded. This group is well known in Latin literature as the agnatic kindred. When the second group is found we call it a *gens*, and the agnatic organisation the *gentile* organisation. Where the clan organisation prevails all other kindred are recognised, together with the clan kindred as belonging to the tribe,

for a tribe is always a body of kindred real or conventional. In the same manner, where the gentile organisation prevails, the gens, together with all other kindred, constitute the tribe, while the confederacy is a group of tribes united for offensive and defensive purposes with artificial kinship established as a legal fiction.

In America we call the name of the clan and also the name of the gens its totem, and totemism is considered a method of naming. Among some tribes the child on coming to puberty takes a new name, and this name is called its totem, and totemism still means a system of naming.

In every tribe among the Amerinds societies are organised which were formerly called "medicine societies" and then "religious societies." To understand their nature it becomes necessary to understand the cosmology and religion of the Amerinds. We may not enter into this subject fully, but certain explanations are necessary in order to understand how the word *totemism* is used in this country.

All the tribes believe in ghosts, but they believe that everybody, whether animal, plant, spring, stream, river, lake, or sea, and every drop of water, together with every star in the celestial firmament has a ghost, and the milky way is the path of ghosts. Every body or corporate existence has a ghost. These ghosts can leave their bodies and wander at will while they perform thaumaturgic feats. The agencies of all phenomena are ghosts; ghosts rule the heavens, and preside over the movements of the stars; ghosts rule the waters and preside over the floods, droughts, and storms; ghosts rule over the rocks, hills, and mountains, and preside over their activities; ghosts rule over the plants, and provide for their growth and decay; while ghosts rule over the animals—human animals and all—and control their activities. In this theory of universal animism and inert bodies informed with ghosts, all the Amerinds believe. Bodies are inert and of little consequence, but ghosts are the practical agents of all things. By the intensity and universality with which these doctrines are held they are impelled to the organisation of bodies of men whose function is the control of ghosts. These societies are also named, and the names of the societies are their totems, so that totemism pertains to individual names, to clan names, to gentile names, to tribal names, and also to society names.

The name which the individual assumes at puberty is the totem name of the individual; it is also the name of the thing for which the individual is named. Now, the individual assumes the name of the thing which is revealed to him in a dream, or of a thing that is revealed to him in a state of ecstasy produced by fasting in solitude, as among some of the Siouan tribes; or it may be the thing which is revealed to him in a state of intoxication, as among some of the Muskhogean tribes, who, for the purpose, drink a decoction which is known among white men as the "black drink." When shamanistic societies are organised, their names are also their totems, and apply to the societies as well as to the things to which they are devoted. This is the Amerindian custom, and is also the custom of American students.

In tribal society we find very interesting superstitions about names, for the name is held to be an inherent attribute or property of the thing; again, the object from which the puberty name of the individual is taken becomes his tutelar deity. In like manner the totem name of the clan, the gens, and the tribe severally become tutelar deities of these bodies. It may be that the name of the society becomes its tutelar deity, but of this there is yet insufficient evidence. Such are the customs and superstitions of the Amerinds about names, and we call this doctrine of naming "totemism."

In the April and May numbers of the *Fortnightly Review* (1901) Mr. J. G. Frazer discusses the subject of totemism as if he were discussing the nature of shamanistic ceremonies. Here we must explain how we use the term shaman. The shaman is the head man of the society which is organised to promote good and avoid evil. The good and evil of this world are multifarious; health and disease are good and evil, plenty and

want are good and evil, peace and war are good and evil. As the ghosts are agencies of all classes of good and evil, so the shamanistic societies are organised to control good and evil of all kinds. The function of such societies was first seen to be medical, and the shamans were called "medicine men." Then it was discovered that the societies were also organised to control moral good and evil, and they were called "priests." At last it has come to be recognised that these societies are organised to control every good and evil, and that particular societies are organised to control special sources of good and evil, and that in every confederacy in America there are a number of these societies, every one of which has charge of some particular class of the sources of good and evil. We call them all shamanistic societies.

It will thus be seen that what Mr. Frazer calls totemism we call shamanism, and we use the term totemism to signify the system and doctrine of naming. The name of the society is also a name of every member of the society. Thus, John Smith and James Jones may be Presbyterians, and they may also be Democrats and Americans, and yet retain the names John Smith and James Jones, though their children address them as fathers and their parents as sons. Now all the diverse methods of naming people Mr. Frazer confuses with the functions of the societies to which they belong. Since Howitt and Fison gave us the original account of some of the peculiarities of tribal society in Australia, we have not failed in America to follow subsequent discoveries in the same field made by Englishmen and other Europeans, and have rejoiced in the revelation which they give about the social organisation of Australian tribes.

Shamanistic societies must not be confounded with clans, gentes, tribes, and confederacies. The confusion in distinguishing these organisations is found in much of the literature relating to Australian tribes, so that the materials gathered there can be but imperfectly assimilated by students in America to the concepts which they are developing in the study of the Amerinds. Such at any rate has been the experience of the writer.

In savage society the shamanistic bodies pervade the clans, tribes, and confederacies, but they do not constitute governmental units. One of the important distinctions which we make between savagery and barbarism consists in the relation of these societies to the governmental units. In barbarism the societies, or "brotherhoods" as they are almost universally called, become integral parts of the governmental organisation, like the phratries in Hellenic tribes. Every shamanistic society is a brotherhood, and its chief is their father. When the father of the brotherhood is the elder man of the gens, and the elder man or chief of the tribe, and the elder man or chief of the confederacy, then the civil and religious control of the people is consolidated in the head of a hierarchy of patriarchs. As soon as this is accomplished there comes about a consolidation of ecclesiastical functions with governmental functions in all the units in the hierarchy of government. The extent of this consolidation in barbaric tribes varies greatly, but it is always manifest to a greater or less degree, so that the phratry is recognised as one of the units of governmental organisation. To the student of Roman society this will be apparent. I hope that my European co-labourers in the study of tribal society will pardon me when I express the opinion that this discrimination is at the present time of prime importance. What we now know of Australian tribal society seems to be in confusion, and this confusion can be largely cleared up by studying the Australian tribes both as clans and as societies.

Mr. Frazer describes the *churinga* of the Australians, and attempts to show how they are used by Australian tribesmen. In America we call these paraphernalia of the ceremonies "sacred objects." It is very instructive to note from time to time in this language or that by what name the same things are called. In the Zuñian language they are called *te-'thl-na-we* (*te* = regions, *'thl* or *thlea* = to carrry, *na-we* = things). The entire sentence word therefore signifies things that carry to regions. On some of

these things inscriptions and various other ornaments and devices are placed. These inscriptions the Zuñi call *awa-thlea-p'-na-we* (*awa* = their, *thlea*, which is the 'thl in the former word, = to wear or to bear, and *p'-na-we* = speech); the whole collocation of sounds signifies speech-bearing possessions. It is thus that from time to time we obtain linguistic evidence that the Amerinds consider the sacred objects or *churinga* to be speech bearing.

Let us consider the nature of the ceremonies which they perform in order to influence the ghosts. Fundamentally they must do something to please them. That in which savage men take most delight is music and dancing, and all their shamanistic societies perform terpsichorean ceremonies. When the ghosts are pleased then is the time to induce them to act. This leads to altar representation. The altar of savagery is a spot cleared on the ground on which to place certain paraphernalia, or it may be a table erected for the purpose. On this table a variety of things are displayed, and with them a variety of ceremonies are performed. These ceremonies constitute a gesture speech, and the paraphernalia of the altar consists of objects which may be used in this gesture speech to represent and illustrate the ideas which the performers desire to convey.

For example, a rain society is organised among many of the tribes of North America. This society has charge of the methods of producing rain through the influence of the ghosts that control the rain. On the altar they place emblems or picture-writings of clouds, with vertical lines from the cloud symbols to represent raindrops. With these rain-symbol tablets they arrange ears of maize of the colours which they admire, and crystals of quartz with other beautiful gems, and a vase of honey—which they consider a luxury—and wooden birds painted and adorned with feathers; many such objects are devised. Then they make prayers and perform ceremonies in which they invoke the ghosts potent in producing rain, and as their invocations proceed perform some ceremony which will express the thoughts of their prayers. They sprinkle the altar to show that it is rain which they desire; they refer to the ears of corn to show that it is rain to produce corn which they desire; they refer to the jewels to show that it is hard corn which they desire; they refer to the honey to show that it is sweet corn they wish; they refer to the birds on the altar to show that it is spring rain which they seek, when the birds are in full plumage.

Savage men are quite familiar with the phenomenon of a multitude of languages; they recognise that usually tribes or confederates speak different languages. The primeval disparity of languages is better known to the savage man than to the civilised man. The Algonquian knows that the Iroquoian speaks another language, and he believes that every species of animal, plant, water, rock, or star, speaks a different language. He is accustomed to communicate with other tribes of men by gesture speech, and he invents a gesture speech for ghosts. This is the significance of the ceremonies and altar paraphernalia discovered in the worship of shamanistic societies. Such facts we discover from tribe to tribe in every instance where a shamanistic society is found among the Amerinds. Perhaps similar facts will be found in Australia. In fact, we are led to believe that they have already been found, and that Mr. Frazer is setting them forth in the review which he gives of the work of Baldwin Spencer and F. J. Gillen on *The Native Tribes of Central Australia*. I have not yet seen this work, but I hail its coming with expectant pleasure.

Let us quote from Mr. Frazer:—

"In order to ensure a plentiful supply of a certain grub known as the witchetty grub, which is a favourite article of diet with the natives, and only appears for a short time after rain, the men of the Witchetty Grub totem repair to a shallow cave in a ravine, where lies a large block of quartzite, surrounded by some small rounded stones. The large block represents the full-grown grubs, the small stones stand for the eggs. On

reaching the cave the head man of the totem group begins to sing, while he taps the large block with a wooden trough, such as is used for scooping the earth out of burrows. All the other men at the same time tap it with twigs of a particular gum tree, chanting the while. The burden of their song is an invitation to the insect to go and lay eggs. Next, the leader takes up one of the smaller stones, representing an egg, and strikes each man in the stomach with it, saying, 'You have eaten much food,' after which he butts at the man's stomach with his forehead. When this ceremony is over, they all descend from the cave into the bed of the ravine, and stop under a rock, at which a great leader of the Witchetty Grub totem in the far past is said to have cooked, pulverised, and eaten the grub. The head man of the party strikes this rock with his trough, while the older men again chant invitations to the animal to come from all directions and lay eggs. Ceremonies of the same sort are performed at ten different places. When the round has been completed the party returns home. Here, at some distance from the main camp, a long narrow structure of boughs has meanwhile been got ready ; it is designed to represent the chrysalis from which the full-grown insect emerges. Into this structure the men, every one with the sacred design of the totem painted in red ochre and pipeclay on his body, enter and sing of the grub in the various stages of its development. After chanting thus for a while, they shuffle out of the mock chrysalis one by one with a gliding motion, singing all the time about the emergence of the real insect out of the real chrysalis, of which their own performance is clearly an imitation. The whole of these ceremonies, from beginning to end, must be performed by the men fasting ; not until the whole is over are the performers allowed to eat and drink."

This is clearly a ceremony analogous to those which we are studying in America. We call them rituals, and speak of the ritualism of shamanistic societies. Scores of them have already been studied, hundreds of them have already been witnessed, and they all have the same fundamental characteristics as being sign-language ceremonies or gesture-speech prayers. Mr. Frazer makes a distinction between magic and religion ; this may be properly discriminating when by religion we mean civilised ceremonies, and wish to distinguish them from the ceremonies of tribal men, then these ceremonies may be called the practice of magic, but we must not forget that these magical ceremonies of tribal men are religious ceremonies to them, and that they are just as earnest in their performance and as firmly believe in their efficacy as do civilized men.

I hope that I may be allowed to express an opinion about other sources of confusion which I find in the reported observations about Australian tribes.

Among all tribal people we discover strange prohibitions ; thus, a man is prohibited from marrying a woman of his clan, but this he may avoid by being adopted into another clan, and there are various other methods by which it may be avoided. He is often prohibited from eating certain kinds or portions of food, and he is often prohibited from killing certain animals. We call the thing prohibited a *tabu*, and the prohibition of tabu and the doctrine of tabus—which is quite an important subject, as it reveals the ideas of tribal men—we call *tabuism*.

Many years ago M'Lennan propounded a doctrine of exogamy and endogamy in terms which since have led many students astray. As we find it among the Amerinds, the exogamic group is always the incest group ; this group is the clan of savagery, and it is the gens of barbarism. While in theory it is consanguineal, in practice it is often something more. Persons are included in the group by adoption. In the clan, adoption is preceded by some ceremony, and the mother of the clan makes the adoption. In barbarism ceremony also is necessary, but the adoption is by the father or patriarch. If a man is adopted into another clan he may marry in his former clan. The tribal peoples cannot be divided into those which are exogamous and endogamous, but every tribe is exogamous in some one of its groups, and endogamous in the others. Exogamy and endogamy are, therefore, correlative phases of one institution in every tribe in

America. The failure to recognise this leads to much of the confusion in our knowledge of Australian tribes.

The great philosopher, Herbert Spencer, early expounded a doctrine of the origin of religion. He found it in the posthumous regard and worship paid to great chiefs, especially when their superiority consists in military achievement. Thus, directly and indirectly he made religion to be the child of war. The study of this subject among the Amerinds leads to the conclusion that religious association begins in the organisation of shamanistic societies founded upon cosmological doctrines, chief among which is the doctrine of ghosts. This error has vitiated many of the observations made in Australia and elsewhere. Men see the facts through the glasses of their theories—which is good if theories are good, but bad if theories are bad. J. W. POWELL.

Since the above was written I have read Spencer and Gillen's book, and my anticipation of its value from the review of Mr. Frazer have been more than realised. It is a great contribution to our knowledge of tribal men. J. W. P.

[*For a discussion of Mr. Powell's view of totemism see* MAN, 1902. 84. *below.*]

Thessaly. **Bosanquet.**

Prehistoric Villages in Thessaly. *By R. C. Bosanquet, M.A., Director of the British School of Archæology in Athens.* **76**

Important finds were made in the summer of 1901 by MM. Staës and Tsountas, Ephors of the National Museum in Athens, at two sites in the fertile plain which extends from the foot of Mount Pelion round the shores of the Gulf of Volo, the ancient Iolkos. It was the discovery of a large "beehive-tomb" on the hill of Dimini, three miles N.W. of Volo, that led M. Staës to excavate there. The tomb had been robbed soon after its construction, and there remained only a few trinkets of gold and glass paste, enough to mark it as contemporary with the Mycenæan *tholoi* of Attica. In probing the neighbouring slopes M. Staës found that the tomb had been cut in ground largely composed of the *débris* of an earlier fortified village, which had covered the whole hill-top, about 100 yards in diameter. Except that the huts were rectangular, the plan of the whole, with its three concentric ramparts and two entrances, was that of many British hill-forts. Later in the summer M. Tsountas discovered and excavated a similar settlement at Sesklo, some miles further west. No trace of bronze was found and stone implements were abundant, but the pottery of both places was of a more advanced kind than that usually assigned to the Neolithic Age in Greece. It is hand-made ware, with a polished buff surface covered with geometric patterns in a slightly glossy brown-black paint. The commonest vessel is a bowl, more broad than deep, with straight sides converging to a narrow base. The handle is a mere protuberance with a pierced string-hole. The design, which covers both inside and outside, is a patchwork of geometric motives, chequers, zigzags, spirals, and irregular key-like figures. As a rule only one pigment is used, contrast being obtained by the isolation of important figures, especially large single spiral coils, reserved in the buff ground colour within a darker field, which is varied by the employment of stripes, hatching, cross-hatching, and solid black. An effective use is made of red on one large jar with a nearly spherical body and low cylindrical neck; it is covered with a bold strapwork pattern, the bands of which, crossing on the shoulders, enclose almond-shaped spaces which are coloured a bright red.

Of neolithic pottery with incised ornaments there was comparatively little at Dimini, though the excavation was carried down to the rock. At Sesklo, where the excavation is still unfinished, a good deal of incised ware has been found; while a still earlier stage is illustrated at the neolithic station of Marmariani to the east of Larissa, where trials showed incised sherds far outnumbering the painted. Incised or painted, the patterns have a family resemblance, though the painted ware has in many cases been

influenced by basketwork. The excavators have classified upwards of sixty different geometric motives which appear in innumerable combinations and permutations. Numerous "idols" were found; some of marble, in form surprisingly unlike those of the Cyclades—one, for instance, is shaped like a bolster with tied-in neck and adorned with meander-patterns in red; others skilfully modelled in clay, for the most part steatopygous female figures with an exaggerated abdominal fold; others acrolithic with a stone head affixed to a clay body. Implements of stone, including a fine oval mace-head pierced through its longer axis, flint and obsidian flakes, bone needles and gouges, stores of figs and grain, complete the picture of a vigorous local culture, the affinities of which are rather with the Thracian than with the Cycladic area.

The explorers have detected sites of the same character in other parts of Thessaly, and M. Tsountas has now resumed work there. Their account of the excavations, a quarto volume with fifty plates from photographs and from drawings by E. Gillieron, will be published by the Greek Archæological Society and is expected to appear in 1903.

R. C. BOSANQUET.

Religion. **Lang.**

The Supreme Being and Totems in Saráwak: A Note in Reply to Mr. McDougall. *By Andrew Lang, M.A.* (*Cf.* MAN, 1902. 62–63.) **77**

Mr. McDougall invites me to express an opinion as to whether "the belief in "a Supreme Being was either (*a*) independently acquired by one people only and "transmitted to others by descent or by borrowing, or (*b*) was independently acquired by "different peoples but by the same process of thought in every case." He supposes me to accept the second alternative for which he sees no grounds, thinking it "*à priori* "probable that the conception of a Supreme Being has developed along different lines "among the various peoples that entertain it."

A categorical answer cannot, I think, be given to this question. We know that in very many cases the conception of a Supreme Being has been borrowed from Christian or Islamite teaching, while we have little evidence as to any vestige of it which may have existed before, in each case, say, among the Pagan Irish. Again, I could not venture to deny that the conception may have been developed "along different lines," among different peoples, and even among different individuals. How can I know for certain how Moses and Mahomet evolved their idea of a Supreme Being, whether by returning to and reviving, with the force of genius, an archaic notion nearly obliterated, or by dint of speculation unaided, or by borrowing? Nobody of sense will give a dogmatic reply, in each case, where evidence is so scanty and obscure, though in each case a man may have an opinion.

All that I have said, I think, is that a current theory of the development of the conception of a Supreme Being as the last stage in "animistic" speculation, appears to me to be thwarted by the occurrence of the conception (if the evidence for it is admitted) among the very lowest races, who are not worshippers of ancestral ghosts and are not known to believe in departmental deities out of which one may be elected as supreme, In such cases (granting the evidence) we find the effect without the supposed causes, as in other races we find the supposed causes without the effect. That is all my contention. and in the instance of very low and isolated peoples, without the social and animistic conditions often regarded as causes of the conception, I conjecture that the spectacle of things suggested the inference that there was a Maker of things. This is only a conjecture in lack of a better. I cannot possibly pretend to say that the Greeks—Plato, for instance—or that Mahomet, or that the Masai reached their conception of a Supreme Being with the idea of a Maker of things as a starting point. My conclusions are rather negative than positive. However the Andamanese or the Australians got at their idea, it was not, I think, by adoring ghosts, promoting them to godhead, and selecting one

god out of the multitude as supreme. I shall be glad to consider any proofs that the Australians, for example, have declined from a higher culture, but at present I am not aware of the existence of any such proofs.

I think that the existence of *nyarong* ("individual totems") is so closely analogous to totemism (some even think it the germ of totemism) that the wide diffusion of totems is not at all more "wonderful" and, *à priori*, improbable than the wide diffusion of any other superstition. But the sense of wonder differs in different individuals. As to the Punans, since "our knowledge of them is most imperfect," I prefer to wait. My cousin, the late Mr. J. J. Atkinson, had long been familiar with the tribes of New Caledonia before an accident proved to him that they had, if not totems in the fullest measure, yet certainly kindred and protecting animals—lizard, pigeon, mouse, and so on—regarded as "fathers."

I would not assert that the Kenyahs have *not* acquired their belief in the way suggested by Mr. McDougall and Dr. Hose; I only point out that, taking their original paper as it stands, there seems no proof that the Kenyahs must have followed that path.

A. LANG.

REVIEWS.

Race-Contact. **Bryce.**

The Relations of the Advanced and the Backward Races of Mankind, being the Romanes Lecture, 1902. By the Rt. Hon. James Bryce, D.C.L. Oxford: Clarendon Press, 1902. 8vo. pp. 46. **78**

Mr. Bryce has chosen for his Romanes Lecture a most opportune subject. Whether viewed from its social or its political side, the question of the relations of the advanced and the backward races of mankind never before loomed so large in the face of the civilised nations. To the nations directly addressed by the lecturer, Britain and the United States, it has become of special urgency, for they have recently taken upon themselves new and difficult tasks. Nor could anyone be found combining in so ample a measure scholarship and statesmanship and a wide personal acquaintance with other lands and other peoples than his own as Mr. Bryce, to direct their serious attention to the problems involved.

Of course it was impossible within the limits of a single lecture exhaustively to treat a theme so vast. All that could be done was to point out the crisis in the history of the world at which we have arrived, when the globe has been in effect portioned out among the advanced races, to enumerate in general terms the possible results on both the advanced and the backward races of this ubiquitous contact, and to indicate briefly the possible solutions of the difficulties which are certain to arise. To this task Mr. Bryce has accordingly addressed himself; and this he has succeeded in performing with extended knowledge and equally extended sympathies, in a manner calculated to appeal to the earnest consideration of all thoughtful men, to whatever school, creed, or nation they belong.

Scientific anthropologists will read the lecture with unusual interest. The backward races of mankind have occupied an overwhelming share of their attention. They are convinced that even of those of which we know most there is more yet to be learned than is already known. Though science is not political, they are satisfied that even for a political purpose racial questions are imperfectly understood, unless they are studied from the scientific side. They will find support for this opinion in Mr. Bryce's observations as the troubles likely to be caused wherever contact arises without fusion of races, and in the various suggestions for minimising the evils and reducing the friction. To take the particular instance of South Africa, all the troubles referred to are likely to be experienced in dealing with the Bantu nations. The Bantu are, perhaps, the most prolific race on the face of the earth. This characteristic is due quite as much to their institu-

tions as to their physical qualities. Though as yet there is plenty of room on the continent for their expansion, the pressure of their increase has already made itself felt in the more settled districts; and it must extend.

Modification of the habits of the race must be a slow process, even where Christianity and education come in to hasten it. The more rapidly, on the other hand, education and Christianity spread, the more will the difficulties be accentuated. Social and political inequality will be more keenly felt by both sides. Dissimilarity of character and institutions, of modes of thought and feeling, will not change so readily as the nominal religion, and in some respects they will be emphasised by a varnish of civilisation. Suspicion, distrust, race-hatred, discontent, violence will naturally ensue. These consequences are not matter of conjecture. They have already recurred over and over in the history of South Africa, as elsewhere. It is the business of statesmen to prevent their recurrence in the future by assuaging and (if that may be) wholly removing the causes of discord. How to do this will tax their utmost powers. They must begin by taking a full account of all the conditions. Among the conditions the racial characteristics and the racial and tribal customs, beliefs and institutions of the backward peoples are of prime importance. Here it is that a systematic investigation on scientific lines can help them. The course of such an investigation may do much more than ascertain the facts. It may suggest the lines along which the backward people ought to be conducted in order most surely to reach the goal of civilisation, and the means by which the period of transition may be most securely bridged.

Mr. Bryce does not thus insist on the case of the Bantu. His observations are applicable to all the lower races, though it may be permitted to us to suspect that the imposition on this country of additional responsibilities in South Africa was among the chief causes determining his selection of the subject. Nor does he refer to the services which the scientific study of anthropology has rendered, or is capable of rendering, to statesmen engaged in the consideration of the immense problems sketched in the lecture. I cannot help regretting the omission. I hope, however, it may be ascribed to some other cause than failure on the part of so distinguished a statesman to recognise the practical value of anthropology, at a time when the governments of India, of our various colonies, of Holland, Germany, and the United States are becoming more and more fully convinced of the importance of exact and official inquiries into the physical, mental, moral, and social peculiarities of the alien races under their charge.

E. SIDNEY HARTLAND.

Britain. **Mackinder.**

The Regions of the World. 1. *Britain and the British Seas.* By H. J. Mackinder, M.A. London: Heinemann, 1902. 8vo. Pp. xv–377, with 138 maps and diagrams. Price 7*s.* 6*d.* **79**

This is a difficult book to review, owing chiefly to the wide extent and variety of the subject and the enormous mass of facts and learning on which it is founded. It would be nearly impossible to epitomise any part of it; though the author has attempted a general summary in his last chapter. It is a geography of Britain in the very widest sense, taking in not only its historical and descriptive geology, but its climate, its ethnology and ethnological history (in which he follows Green perhaps too faithfully), its industrial and economic, and even its strategic, geography. Nor can it be said that any of these subjects are perfunctorily or unsatisfactorily treated. Perhaps, sometimes, there is even a little too much of the play of poetical imagination on a subject which scarcely needs it, as in the latter part of the following quotation: "To the Teutons—
" Easterlings and Norsemen—England owes her civil institutions and her language; to
" the peoples of the west and south her Christianity and her scholarship. Two distinct
" streams of ethical and artistic influence converged upon the island from the Rhine delta
" and from the estuary of the Seine; *and the balanced English character has therefore*

" *a physical counterpart in the symmetry of the eastern and southern shores pivoted on* " *the Kentish forelands.*" But his descriptive bits are always true, terse, and graphic. Thus of Norway, " Narrow fiords penetrate far up the valleys, which are deeply scored " into the surface of the plateau. Here and there a sill gives space for a meadow and " the home of a Norseman—half farmer, half fisherman—whose only road is by boat on " the fiord." Of the Biscayan abyss—" The Bay of Biscay is a fundamental feature of " the map of Europe." Again, " No adequate explanation can as yet be given of the " origin and meaning of the Norway Deep ; but two facts are suggestive ; the deepening " of the channel inland is analogous to the similar deepening of the fiords of Norway " and Scotland in their upper reaches ; and the position of the deep off the plateau edge " of Norway is analogous, though the contrasts are less emphatic, to the position of the " Biscayan abyss along the Cantabrian front of the Spanish tableland."

On page 44 is an interesting passage on the relation of the migrations of fish in the North Sea to the fluctuations of marine currents.

The distinction between eroded tableland and mountain ranges, dwelt upon in p. 59 and elsewhere, is rather geologically than politically or otherwise important. Thus the Grampians and the Pennines are far more like continuous mountain ranges than Snowdonia is.

At p. 67 the contrast between the structure of Scotland and that of England is very well given ; and so is the comparison between central Scotland, the Alsatian valley, and the great rift-valleys of East Central Africa.

The chapter on the physical history of Britain seems to me extremely good, clear, and succinct. But those on racial and historical geography will be most interesting to the anthropologist. They contain short and lucid summaries of what we know on these subjects, and, indeed, of a little that we do not yet know. Thus the author is, perhaps, a little too positive as to the uniformity with which the long-skulled type predominates in all parts of Britain. I do not mean to express much doubt about the existence of this uniformity ; but it certainly has not been quite proved as yet. Haddon and Browne, Gray, Turner, Venn, Muffang, and I are, so far as I know, the only observers who have published anything of value on the subject ; and we certainly have not covered the whole of the ground. Turner's observations—which, however, were not numerous, —included a fair proportion of brachykephali. By the way, the author calls brachykephali *round*-skulled. Though this expression is in pretty common use, it is a pity it should be so : either " short-skulled " or " broad-skulled " would be more truly applicable, as anyone must see who has either read Sergi or observed for himself. " Round " does not rightly include the sphenoid, beloid, or trapezoid forms, the Sarmatic type of Von Hölder, &c.

Some other of the author's generalisations are worth quoting. Thus, after citing Rhys and Morris Jones on non-Aryan syntax in Brito-Celtic languages, and noting a probable correlation with the dolichocephaly of our Goydels and Brythons, he adds :— " It would appear, therefore, that while Britain has been subjected to overpowering " Celtic influence, the amount of Celtic blood is probably not very great. In the main, " the races of Britain are either Teutonic or aboriginal and pre-Celtic."

He notes, as a proof of the completeness of the Norse occupation of Caithness, Sutherland, and Dumfriesshire, that " there alone in all Britain the river names are " Teutonic, and not Celtic." Here we should read " some of the river names," and add after Dumfriesshire, " English Cumbria and parts of Yorkshire." The Evenlode and the Isbourne, if not the Windrush, in the Cotswolds, appear to have Saxon names ; the population thereabouts is of Saxon type. The phenomenon does probably imply that these tracts had been, or had been made, waste and void.

He also remarks on the predominance of short dark types in the West Riding, due, he conjectures, to the preservation in the forest of Elmet of a percentage of the

aboriginal population. I think he bases this remark on one of my own maps, borrowed by Ripley for his great work on the Races of Europe. My subjects were mostly townsmen, Sheffield grinders and the like, and probably degenerate. But the native breed in West Yorkshire is, or was, very generally big and fair. I myself think that Anglian blood predominates there, and that Elmet and Loidis were swept pretty clean by Ethelfrith ; but more facts are wanted, and I have long been trying to get them.

The following is an exceedingly good statement, one of the many jewels embedded in this book : "There may still be distinguished some nine several provincialisms in the British population. There is (1) the Catholic Irishman, essentially a pre-Celt, even when he does Celtic Erse into English ; (2) the Ulsterman, not quite Teutonic, however Protestant ; (3) the Scotsman of the far north, almost a Scandinavian ; (4) the Highlander, pre-Celtic and mercurial, yet with elements in his character very different from the Irish ; (5) the Lowlander, Teutonic in the main, but descendent neither of Norman nor of Dane ; (6) the Welshman, with a strong pre-Celtic infusion, dark, and of emotional temperament ; (7) the Englishman of the north and east, an Anglo-Dane ; (8) the " Englishman of the south and west, a Saxon, verging, especially towards Cornwall, on " Celtic and pre-Celtic ; finally (9) the Londoner, the Cockney, originally East Saxon " or Kentish, but now a cosmopolitan."

These divisions could hardly be mended unless by minute subdivision. Of course, the Cornishman is very different from the Berkshireman, and the Ayrshireman from the man of the Merse.

The maps, some borrowed, many original, abound wherever they are needed by the text, and generally merit very high praise for their ingenuity and clearness ; in fact, it would be difficult to name any book so well and appropriately illustrated.

J. BEDDOE.

Technology.

Farrand : Dixon.

The Jesup North Pacific Expedition (*Mem. Am. Mus. Nat. Hist.*, 11 *April* 1901). **80**

American anthropologists are fully alive to the importance of a careful study of their native baskets. Probably few anthropologists in this country have any idea of the immense variety of form, technique, and decoration that is to be found in the aboriginal basketry of North America. Two important papers have been published recently which deal with the ornamentation of North American baskets. They are : *Basketry Designs of the Salish Indians*, by Livingston Farrand (*Mem. Am. Mus. Nat. Hist.*, Vol. II. (the Jesup North Pacific Expedition) April 1900), and *Basketry Designs of the Indians of Northern California*, by Roland B. Dixon (*Bull. Am. Mus. Nat. Hist.* Vol. XVII. (the Huntington California Expedition), February 1902). Both of these memoirs are admirable examples of the modern method of studying primitive art, and the illustrations are profuse and excellent. Dr. Dixon supports the view enunciated by Dr. A. L. Kroeber in his *Decorative Symbolism of the Arapaho* (*Am. Anth.*, N.S., Vol. III., p. 308), that in the mind of primitive man realism and decoration are not differentiated, and that it is only with increased cultural development that a gradual differentiation of these two tendencies is brought about, until, in the end, they may become almost, if not quite, distinct ; but other factors also come in and complicate the problem. The Californian designs appear to occupy a place about midway between the somewhat preponderant realism of the Salish designs and the decorative conventionalism of the Arapaho.

Since the above was in type a valuable little paper, *Directions for Collectors of American Basketry*, has been published by Otis T. Mason in Part P. of *Bulletin, U.S. Nat. Mus.*, No. 39, 1902, which is a valuable introduction to basketry technique. It is illustrated by 44 figures.

A. C. H.

PROCEEDINGS OF SOCIETIES.

Proceedings. **Folklore Society.**

Ordinary Meeting, May 28. Mr. M. Longworth Dames read a paper on *Balochi Folklore.* The Baloch race is one of the old Iranian stock extending from the Indian frontier to S.E. Persia. This paper related to the tribes on the Indian frontier which still speak the Balochi language, among whom a great amount of old heroic poetry is still orally preserved, which has of late years been collected by the author of this paper and others. This poetry relates to the migrations of the Baloch race, and to the wars of the 15th and 16th centuries, which are treated in an epic spirit. The manner of singing these ballads with musical accompaniments was described, and some account given of the principal legends dealt with in them. The central event is the thirty years war between the Rinds and Lasharis, caused by the competition of their chiefs for the hand of the fair Gohar, the Helen of the legend. The historical element in these stories was alluded to, and also a possible mythical element as shown chiefly in the legend of Nodhbandagh, the typical generous man, whose name is almost a literal translation of "cloud-compeller." 81

Some account was also given of the mythical origin of the Baloch race, and of the ballads which describe their wanderings previous to the great wars, and of the derivation of the tribes from eponymic founders; a very modern example of this practice. Legends were given accounting for the origin of the names of several tribes. Some appear to be nicknames; one or two possibly totemic.

Legends of the saints were then described, most of which are connected with the popular shrines of the north-west frontier of India. Some of these are pre-Islamitic, possibly Buddhist.

The ordeal by fire, divination, omens, the casting of lots, and witches were alluded to and the superstition regarding the "mamm" or were-bear described. Some account of customs relating to eating and the erection of tombs and cairns was also given.

The position of women among the Balochis was discussed, and the general respect shown to women and children in war. Insults to women and abductions or elopements form a frequent ground for blood feuds. Love is often romantic in its nature; specimens were given of popular love poems in illustration of this; also of those of a comic nature directed against the obnoxious husband.

The severity of the Baloch code of honour, the murder of wives and lovers by injured husbands, and the doctrine of hospitality which prevents the surrender even of such fugitives when they take refuge with another tribe, the blood feud and the methods employed in settling such feuds were then dealt with.

The paper concluded with a description of a tribal jirga or council called together to deal with outstanding feuds and disputes, and with the merrymakings and feasting, the dances and singing which celebrate the reconciliation of the contending parties, and with some quotations from poems illustrating the spirit of the freeborn mountaineer.

Proceedings. **Anthropological Institute.**

Ordinary Meeting, June 10, 1902, A. C. Haddon, Sc.D., F.R.S., President. 82

The election was announced of the following as ordinary Fellows of the Institute:—Major P. Molesworth Sykes, F.R.G.S., Mr. S. Hazzledine Warren, F.G.S., Mr. Dudley D'Auvergne Wright, F.R.C.S.

Mr. Myres, Secretary of the Anthropological Institute, read a paper "On an Archaic Bronze from Southern Persia." Major P. Molesworth Sykes read a paper entitled "Anthropological Notes in Southern Persia," illustrated with lantern slides and an exhibition of ancient bronze implements.

The paper was discussed by Messrs. Hogarth, Longworth Dames, Read, Myres, and Garson.

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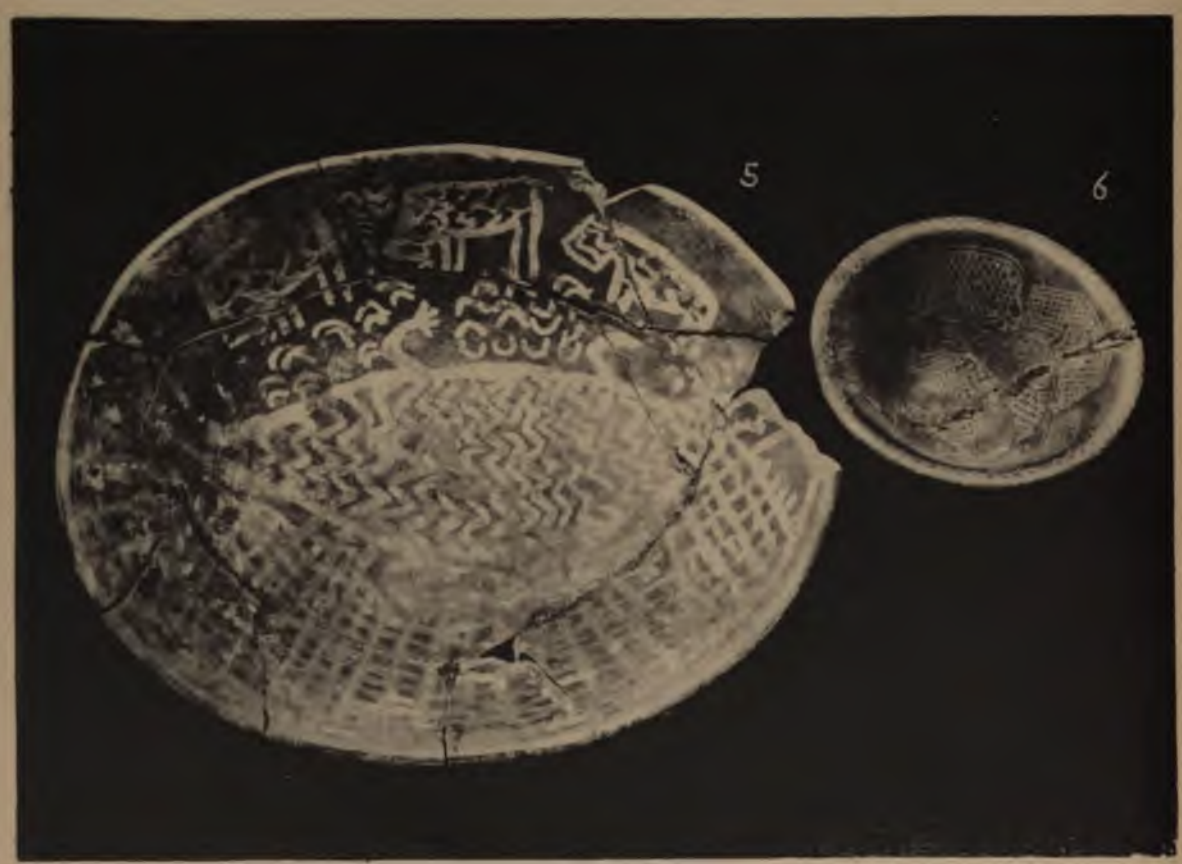

PREHISTORIC EGYPTIAN POTTERY.

ORIGINAL ARTICLES.

Egypt. With Plate H. Petrie.

Prehistoric Egyptian Pottery. *By W. M. Flinders Petrie, D.C.L., LL.D., Edwards Professor of Egyptology in University College, London.* **83**

The earliest class of pottery known in prehistoric times in Egypt was the red polished ware, and on almost the earliest examples of this (sequence date 31–34) are found the paintings in white line, which belong therefore to the oldest civilisation known in the country. Animal figures are not very common on these designs, and the examples here shown (Plate H.) are some of the best that I have seen. All the figures are on the scale of one third.

1. Jar with figures of goats on it, drawn in the usual manner. This class of cross-lined pottery with very thick white lines has not been found in any of our excavations north of Thebes; it is said to come from Gebeleyn.

2. Jar with two animals and plant pattern up the side.

3. Jar with two rows of objects around it, which are otherwise unknown. The upper figures might be adzes or hoes, the lower figures are curiously like lictors' fasces, but no such forms are known in Egypt; they may, however, be a form of stone axes set in handles. Certainly neither can be the hieroglyphic *neter* sign, as that had double projections down to dynastic times.

4. Jar with a deer and a hedgehog, and plant pattern up the sides.

5. Large dish with a crocodile filling the bottom of it, and three hippopotami on the upper edge. Below the crocodile is a cross pattern which might be intended for water ripples.

6. Small dish with five hippopotami round the sides; the dish is tilted to show one side completely, and thus the other side is foreshortened. In the middle are three fishes.

W. M. FLINDERS PETRIE.

Totemism. Hartland.

An American View of Totemism: a Note on Major Powell's Article. MAN, 1902. 75. *By E. Sidney Hartland, F.S.A.* **84**

I entirely agree with Major Powell in the conviction, which evidently underlies his remarks, of the necessity of defining our terms if we would make any progress in the study of Totemism. In some respects I am inclined to go further than he does. For example, I demur to using the term *totem*, even when qualified as *individual totem*, for the name assumed by a youth at puberty, or for his protecting spirit or being revealed to him during ecstasy. It may be that in the Algonquin languages the clan-totem and the individual totem are both called *totem*. But we have not yet determined the relationship between these two orders of superior beings; and until we do so I think it would be well to denominate them by distinctive names about which there can be no confusion. Is there any objection to the word *Manitou* as the designation of what has been called the individual totem? This word is, I think, actually used by some of the American tribes for the purpose; and its provisional employment by us would tend to clearness of expression and of thought.

Similar observations apply to the presiding genius, or deity, of a shamanistic society, and that of a tribe. Confusion must result if we do not keep them separate and distinct from those of the clan and the individual, by means of terms which will not prejudge the question of their relations. Major Powell does not refer to what have been called *sex-totems*. They are not an American phenomenon. It seems to me they have as much—and as little—claim to be considered totems as the deity of a shamanistic society.

I am not clear what Major Powell means when he writes: "Where the clan "organization prevails all other kindred are recognized, together with the clan kindred "as belonging to the tribe, for a tribe is always a body of kindred, real or conventional. "In the same manner, where the gentile organization prevails, the gens, together with "all other kindred, constitute the tribe, while the confederacy is a group of tribes "united for offensive and defensive purposes with artificial kinship established as a "legal fiction." It has become the practice on this side of the water to use the term *tribe* to mean a local or territorial group, without reference to the question of kindred. The reason is this. A band of savages is usually found to consist of more than one kindred. Some of the kindreds of which it is composed often acknowledge a kinship with one another. A closer kinship, however, may exist between them and kindreds of other bands or local organizations. A clan, or a gens, may extend over an indefinite area, and may comprise members of many tribes. Peoples organized on the basis of mother-right, or of clan, as Major Powell defines the word *clan*, are specially liable to this scattering of the kindred, because as a rule men do not go to live with their wives and their wives' kin, they rather take their wives to live with them and their own kin. When the organization is on the basis of father-right, or of the gens, the tendency is to concentrate the kin in the local group, though even then the concentration is not always complete. The test of kinship is found not merely in the totem or symbol of the kin. The right of marriage forms a still more certain test. From whatever cause arising, savages have a great horror of incest. To them, incest means marriage or sexual relations between persons recognized as belonging, even though remotely, to the same kindred. Where totemism exists in full force, marriage and sexual relations are absolutely prohibited between members of the same totem. If the tribe consisted of "a body of kindred real or conventional," marriage within the tribe would be prohibited. If it comprised all the kin, marriage would be permitted with any kin of other tribes. But this is very rarely the case. Usually marriage is permitted both within and without the tribe. In both cases it is restricted to persons not belonging to the same kindred. Moreover, two or more distinct kindreds, whether clans or gentes, are frequently recognized as related to one another. This is what I suppose Major Powell means when he says: "Every tribe is exogamous in some of its groups, and endogamous in "some of the others." For he adds: "Exogamy and endogamy are, therefore, "correlative phases of one institution in every tribe in America." In other words, if I interpret correctly, the clan or the gens cannot marry into itself, but it has the right of *connubium* with the other clans or gentes within the local group. A given people is thus exogamous as to the clan or gens, endogamous as to the local group. Now if the kindreds between which a right of *connubium* exists were recognized as akin to one another, the law of incest would apply, and there would be no right of *connubium*.* There could then be no endogamy of the local group, and the students who have been led astray by misunderstanding M'Lennan's doctrine would be right. But it is because the inter-marriageable kindreds are not recognized as akin that they have the right of *connubium*.

The kindred may of course be, as Major Powell says, a mere fiction or convention. But as we in this country use the word *tribe* the kindred has no necessary connection with the tribe. I do not quite understand whether he means to suggest that the kindred has such a connection with the local group, that the local group is always recognised as consisting of more or less closely related kinsmen. If so, I think, with deference to his great authority, that this definition goes beyond the facts. I would submit that the term *tribe* should be used solely in the sense of a local group, and that the terms of Major Powell's definition should be modified so as to indicate that there is no necessary

* I am, of course, writing in general terms; and there may be exceptions, though I do not recall any at the moment.

connection between the kindred and the tribe. In advancing this I do not deny that sometimes a whole local group may be recognised as akin. I have already said that there is a tendency in this direction where the organisation is on the basis of father-right. What I want to emphasize is that *tribe* and *kindred* have no necessary connection either in idea or in fact.

I am much interested in Major Powell's observations on the practices of the Arunta. He rightly describes certain of their ceremonies as analogous to those of the shamanistic societies of America. Two years ago I ventured to call attention to some aspects of this analogy, and expressed the opinion in my Presidential address to the Folklore Society (*Folklore*, Vol. XI., p. 75) that the Arunta organisation was undergoing a slow transformation from totemism into something more like the societies of British Columbian tribes. There are reasons for believing that the Hopi ceremonial societies have grown out of clan-totemism. Among the peoples of the western deserts of North America, however, the totemistic system has been to a great extent preserved alongside of the ceremonial societies. Among the Arunta, on the other hand, the ceremonial societies seem to be absorbing the totemic organisation. The impression left on Major Powell by the perusal of Dr. Frazer's articles in the *Fortnightly Review* is that the Arunta groups are not totemistic societies at all but shamanistic societies. This cannot be a definitive judgment because he had not at the time of writing read the book itself. Now that he has done so, as we learn from the postscript, it would be interesting to know whether the impression has been confirmed. Perhaps it has been modified.

The convenient use of the words *clan* and *gens* to signify organised groups of cognates and agnates respectively, and the important point of the relation between savage ceremonies and gesture-language, are deserving of careful consideration, but to discuss them here would be to extend this note to an undue length.

E. SIDNEY HARTLAND.

Totemism. Thomas.

An American View of Totemism. (*Cf.* MAN, 1902. 75.) *Note by N. W. Thomas, M.A.* 85

Major Powell's article makes it clear that terms, whose meaning is comparatively well established in Europe, bear a totally different meaning in America. Totemism is, according to him, a system of naming; shamanism is made equivalent to totemism in Dr. Frazer's sense, and a *tabu* is not a prohibition but an object whose use is prohibited. It is true that the works of Dr. Frazer do not seem to be known in America, and we may perhaps feel legitimate doubts as to whether the perusal of two articles in the *Fortnightly Review* entitle Major Powell to criticise Dr. Frazer' position. But let that pass.

The mere fact that Major Powell's terminology differs *in toto* from that in use over here is not in itself a condemnation of it, nor yet is the fact that he does not understand the European view of totemism an adequate reason for denying the validity of his classification. *Totem* is originally an Algonquin word, and the Americans are *primâ facie* the people to whom we should look for an authoritative exposition of totemism as it exists in America. The word is used with apparent looseness in Europe; it means, *e.g.*, a system in which the totem is hereditary and which includes exogamy; and it is nevertheless applied to the Arunta system, where neither heredity nor exogamy are found. Dr. Frazer even uses the term of such a purely personal and non-collective relationship as that between a man and his so-called individual totem. This extended use of the term totemism cannot be justified by reference to externals, for in this case we should have to regard as totems the cattle of the Bechuanas, in spite of the fact that the Bechuanas have a clan system, while the whole tribe, irrespective of clan, seems to respect cattle, and that no clan seems to have cattle as its totem. If, therefore, the

application of the term totemism to all the classes of facts enumerated above is to be justified, it must in the end be on the ground of identical meaning. Dr. Frazer takes this line of argument, but the attempt to include the individual totem is hardly successful ; therefore, until the homogeneity of the three classes of facts above mentioned is established, it would be better to limit the use of the term to one well understood meaning, be this what it may.

Major Powell's view is, it is true, rather a revolution than a reform in nomenclature from the European point of view. The real meaning of totemism being, however, still a matter of dispute, we may discuss the American view on its merits. The discussion will fall naturally into two parts : in the first place, we must inquire how far the proposed terminology is in itself logical and consistent ; we may then, if necessary, go on to discuss (1) how far the definition covers all the facts which it professes to include, and excludes the remainder, and (2) how far the classification on which it is based is a logical one.

An examination of Major Powell's nomenclature shows that he proposes to use the word *totem* to mean the following things :—(1) A mark or "clay ;" (2) a body of people organised into exogamous clans ; (3) the name of a body of people ; (4) the name of an individual acquired at puberty ; (5) the object from which an individual takes his puberty name ; and (6) the object from which a shamanistic society takes its name.

For the sake of uniformity Major Powell might just as well have included in the list of meanings that of the object from which a clan takes its name (or is the omission accidental ?), his arrangement would then have had a certain amount of symmetry ; as it is I am afraid one cannot even say that for it. It is difficult to see the advantage of a system of nomenclature where everything is called by the same name.

If *totem* originally meant a mark it might be applied to the object which the mark represents ; little or no confusion would arise. But the term cannot be used in scientific terminology as the equivalent of clan without the risk of grave confusion. The meaning "clan" may well have arisen from a European misinterpretation, the mark being mistaken for the clan, because the Amerinds said, "What is your mark ?" when they meant "What is your clan ?" But it might just as well be maintained that dance in the Bantu languages means "clan" because the equivalent inquiry was, "What do you dance ?" Whether this is so or not the double meaning has no place in anthropological terminology.

Major Powell's terminology being what it is, we need hardly go on to discuss how far his definition fulfils its function, nor need we ask how far the facts which he selects for the basis of his definition have been wisely selected. So far as the definition goes, my grandfather may be my totem if I am baptised at fourteen and named after him.

By some extraordinary chance Major Powell has selected as the basis of his theory of totemism precisely those persons or classes of persons to whom, though with certain variations and greater strictness of definition, the European turns in order to study totemism. If totemism is merely a system of naming it is difficult to see on what principle individuals, clans, and bodies of persons to whom are attributed special powers over certain realms of nature and an intimate connection or rapport with the objects which they control, can be grouped together. This course is, as we have seen, justifiable only on the supposition that this special rapport is believed to exist, not only in the case of the last, but also of the other two classes. How far such a rapport is believed to exist in all or any of the classes of facts which Dr. Frazer and, following him, many other European students group together as totemism, and what is the nature of this supposed rapport we may now proceed to inquire.

The central idea of African fetichism is that a spirit, which inhabits temporarily a stone, bone, or other object, becomes for the time being the servant of the possessor of that object. The magical apparatus is sometimes composed of a bag made of the skin

of some rare animal which contains parts of various other animals, such as dried monkeys' tails, claws, &c. Amongst other gifts these bags are believed to confer invulnerability; sorcerers are said to carry in them the snakes and other noxious animals which they send out to harry their enemies. The animal thus attached to a sorcerer (his familiar) is sometimes regarded as another form of the man himself (it is a world-wide belief that sorcerers can assume the form of any animal they choose), sometimes as a species of evil spirit infesting him, and sometimes as his only messenger. This same diversity of view meets us in the werwolf superstitions. The werwolf is sometimes a transformed man, sometimes a form that can be assumed by man at will; sometimes it is the double and sometimes no more than the messenger of the werman. Bearing in mind that the sorcerer in animal form can barely be distinguished from the werwolf, it seems that the wer-animal was originally the familiar of the werman. (It may be noted in passing that the werwolf is frequently believed to return to the corpse of his victim.)

We may now turn to totemism and consider how far we find analogous beliefs to those just cited. It can hardly escape attention that the medicine bag of the Ameriud is the exact analogue of the fetich bag of the negro. It consists of a bag the contents of which are the skin, feathers, or other part of the totem animal. It is carried as an amulet and is believed to confer invulnerability on its owner. The basis of individual totemism seems to be the same as that of fetichism—the association, permanent in this case, of a spirit with a human being whom he possesses or accompanies. This view is borne out by the close relationship between the methods by which the youth obtains his totem and the sorcerer his familiar; in each case the dream is the main factor in the operation. So close is this connection between the familiar and the individual totem that Dr. Frazer regards them as identical.

The view that the totem is regarded as an indwelling spirit is also borne out by a fact narrated by the Prinz zu Wied (*Reise*, II., 190), the importance of which seems to have been overlooked. Many Indians, he states, believed that they had an animal (bison, tortoise, &c.) in their bodies.

The wide distribution of individual totemism in America makes it possible to explain this as referring to the individual and not the clan totem. But in Australia the individual totem seems to be confined to the medicine man. If, therefore, we find a similar belief in Australia we may infer that, in that continent at any rate, it is a part of the creed of clan totemism. It is stated of the Geawe-Gal tribe (*Kamilaroi and Kurnai*, p. 280) "*apropos* of their generic names the Geawe-Gal had a superstition "that every one had within himself an affinity to the spirit of some beast, bird, or "reptile; not that he was sprung from it in any way, but that the spirit which was "in him was akin to that of the creature." This belief suggests that the interpretation suggested for individual totemism can also be applied to clan totemism.

It has been mentioned above that the werwolf is believed to return to look at the body of his victim. In North Queensland when a sorcerer is suspected of having killed a black man, the corpse is placed on a frame and dust or ashes strewn around, if the track of some animal or bird is found the next morning the totem of the malefactor is inferred from it (*Journ. Anthr. Inst.*, XIII., 191, n. 1). Elsewhere the spirit of the offender was believed to return (*loc. cit.*), and in New South Wales the flight of a bird over the corpse was believed to indicate the direction in which the enemy would be found (*ibid.*, XIV., 362). These facts seem best interpreted if we suppose that in North Queensland the sorcerer is believed to return to animal form and that the form is that of his totem, for in no other way does it seem possible to identify the man's totem by observing the footsteps. But if a man is believed to have the power of assuming the form of his totem, the totem is *primâ facie* to be explained like the werwolf and the familiar of the sorcerer. The werwolf is, as we have seen, in its origin conceived as a spirit obsessing a man or associated with him as the familiar is associated with the sorcerer. These

Australian beliefs, therefore, fall into line with those already cited and confirm the suggested view of totemism. On this theory the essential difference between the totem and the fetich is that whereas the human being is regarded as specially associated with an individual fetich or totem, totemism also implies a relation between a human being and a species. How far this distinction is of importance need not be discussed here. It is not difficult to see how totemism, interpreted as I suggest, might, as appears to be the case in South Africa, be transformed into a system of animal worship. These and other questions, such as the applicability of the theory to group totemism, I leave for subsequent consideration. N. W. THOMAS.

Malay Peninsula. **Annandale: Robinson.**

Anthropological Notes on Sai Kau, a Siamo-Malayan Village in the State of Nawnchik (Tojan). *By Nelson Annandale and Herbert C. Robinson.* **86**

The state of Nawnchik (called Tojan by the Malays) is the most northerly of the Siamese Malay States, properly so called, on the east coast of the Malay Peninsula; for in Senggora, though there is a large Malayan element, the Siamese are the dominant as well as the regnant race.

The village of Sai Kau is situated on the interior of Nawnchik, about ten miles from the coast. The population, is roughly speaking, 600, divided almost equally between "Siamese" (*Kong Tai*) and Malays (*Orang Malayu*); the two races, if they may be called so, do not live together, but inhabit separate hamlets of about twelve houses each, divided from one another by rice fields. Each hamlet is under a headman, who is called "*eh-ban*"; the different "*eh-ban*" are responsible to a "*Tuan eh-ban*," who is subordinate to an official called "'*Toh Blat*" or head of the district. The '*Toh Blat*, who in the case of Sai Kau is a Malay, is directly under a Siamese magistrate (*hakim*).

The office of '*Toh Blat* is purely gratuitous, no salary or special privileges being attached to it; whilst the jurisdiction is strictly limited to minor offences against the person, which can be punished by placing the offender in the stocks for not more than one day. The duties attached to the office are principally connected with the system of forced labour in vogue in the Siamese Malay States.

The occupations of the people are almost purely agricultural, consisting of the cultivation of rice, cocoanuts and betel, and the raising of cattle. Both sexes take part in the field work and the women are skilled weavers, there being a loom under nearly every house. The men occasionally search for jungle produce on an adjacent mountain called locally Bukit Besar (the Great Hill).

During a residence of three weeks in the house of the '*Toh Blat* at this village we had excellent opportunities of observing the people and of collecting their implements, &c. They made no objection to our taking measurements of their heads and bodies if approached in a judicious manner, and we obtained a series representing nearly a hundred adults, in most cases with specimens of the hair.*

Preliminary analysis of these measurements shows no difference between "Malays" and "Siamese," but there is evidence of the admixture of an element derived from a third, curly-haired race, probably allied to the "Negritoes" of the Peninsula.

As regards the colour of the skin we could observe no special feature in the case of any one type at Sai Kau, the tint depending largely on the relative amount of exposure to the sun. As very little clothing of any kind was worn, on the whole it was fairly uniform, ranging from a yellowish to a dark reddish-brown.

A small proportion of the people had fairly abundant hair on the body.

* In returning the proofs of this paper Mr. Annandale adds that these measurements were taken with proper anthropometrical instruments, and that the instructions given in *Anthropological Notes and Queries* were followed exactly.—ED.

At Sai Kau a boy is considered marriageable at 15 and a girl at 12, but the 'Toh Blat and the Tuan eh-ban assured us emphatically that there were girls in the village who had borne children at 10 years of age. Twins are considered a rarity, but are not looked upon with any suspicion.

Juvenile mortality is said to be high and to result chiefly from worms, fever, and "diseases of the eyes and stomach." Many old people die of pulmonary affections and of fever (*i.e.*, malaria). Skin diseases are common, especially among the smaller children.

The marriage customs of the Siamese appear to have become assimilated to those of the Malays, and certain articles of ceremonial use, such as the ornament called "*Bunga-nasi*," which is placed on the top of the rice that the bride and bridegroom partake of together, and the racks for "*sireh*" leaf that they exchange, are used in identical forms by the two peoples.

The bride is sold by her parents for from 10 to 20 dollars or their equivalent in kind, but she cannot be forced to marry a man whom she does not like. If her parents refuse to permit her marriage with the man of her choice she frequently elopes.

The bridegroom goes, as a matter of course, to the house of the bride's *father*, but he need not stay there, unless he wishes to do so, for more than three or four days. The bride cannot be forced to leave her parents' roof, but if she refuses to accompany her husband home he can divorce her, and receive back the dowry in full. Neither unmarried girls nor married women are secluded in any way, and they even eat with the men.

The Malays are buried in a cemetery adjacent to the village in which tomb-ports of the ordinary type are to be seen; the Siamese practise cremation, possibly with preliminary tree burial.*

The general intelligence of the people appears to be of a low type, many of the adult males being unable to count up more than ten at a time; and we found it necessary in settling accounts to reckon up every ten cents separately. A few cannot even count so high as ten, and one man actually sold us some fowls for 12 cents ("*dua blas duit*"), which his wife had told him to sell for 20 ("*dua puloh*"), without knowing that he had made a mistake. However, we found that three Malay coolies from the village, who spent a month in our service, were capable of picking up the little that was required of them with a fair degree of rapidity; while one of the three was an excellent jungle guide, being looked upon as a honey "*pawang*" (magician), whom the bees would not sting.

The clothing worn by the men consisted of a waist cloth and a loose wrap occasionally worn over one shoulder. As a rule the head is bound round with a fillet of palm-leaf or a wreath of flowers, and a brilliantly coloured blossom is sometimes worn behind one ear. The women dress in a short Malay "*sarong*" and a wrap that usually covers the breasts, and except when carrying weights they wear no headgear.

All the home-made cloth we saw was decorated with simple check patterns, not unlike those of Highland tartans; indigo, a kind of logwood, and yellow were the favourite dyes.

The common language of both peoples is the Senggora dialect of Siamese mixed to a certain extent with Malay words, which when dissyllabic are pronounced rather as if each syllable were a distinct word. Sometimes a word is taken over from one language to the other without change, *e.g.*, *tuán*, lord or master, but "*krīs*" becomes "*krĭt*," and "*rēhal*," an Arabic word, meaning a reading-stand, is changed to "*jĕhál*." All the old Malays, and many of the younger men, can speak a dialect of Malay which appears to

* Mr. Annandale adds, on this point, "We have discovered that tree burial (preliminary to tree "burial, or not, as the energy of the deceased's relatives may decree) does occur in villages south of "Sai Kau, as it also does in the more northern states."—ED.

be no more affected by Siamese influences than that spoken in the adjacent States to the south; but it is very rare for a Siamese to learn Malay.

The art of the village, which is more elaborated than in many parts of the Malay Peninsula, is largely Siamese, but many of the patterns in common use are derived directly from flowers and animals; we found it was impossible to distinguish between the articles made and used by the Malays and those of the Siamese. The Mahommedans here have no scruple in producing as realistic representations of living things as is in their power. The bamboo shuttles especially are elaborately decorated with incised patterns, many of which are named after different kinds of flowers and creepers; but representations of the rafters of a house and other artificial products also occur. In addition to a pattern called "*gambar orang*" (images of men) that is scratched on one of these shuttles, and consists of a vertical straight line with two pairs of slanting lines meeting it and a small arch at the top, it is possible to distinguish two types of anthropomorphic design. The one that was chiefly found on children's toys was almost realistic, but was embellished with purely decorative lines; the other, confined entirely to the wooden heads of adze-handles and the sheaths of jungle knives, was much conventionalized, and often degenerated into a mere knob representing the nose.

The only musical instruments we heard were bamboo flutes, toy whistles made of clay or bamboo, a jew's harp, and various forms of drums, but there was said to be at least one stringed instrument ("*rebat*") in the village. Old flint locks and converted "Tower" muskets are in use, the people making their own powder. Saltpetre and charcoal are obtained locally, and the sulphur is said to be brought from a "sulphur mountain" in the interior of Senggora. The kris is worn by Siamese as well as Malays when travelling, the form of hilt in common use being that known as "*hulu tajang*" (sometimes called "*hulu perkaka*," or kingfisher handle). The favourite weapon of both peoples is a knife with a curved blade and no sheath, also used as a jungle knife and household implement; but at least one form of this weapon is becoming obsolete, murders being rare and local warfare extinct under the Siamese administration. A simple form of pellet bow is used for shooting birds, the missiles being either seeds or pellets of baked clay; we also collected a rat-trap in which the principle of the bow and arrow appeared.

A marked feature of the ethnography of the village is the number of children's toys that are made. They are mostly either wooden copies of weapons or brightly-coloured figures of animals, and we also obtained a toy palanquin used by children for carrying "*sireh*" leaf when playing at weddings.

Fire is produced either by a flint and steel, or, more rarely, by a fire syringe. The fire drill appears to be quite obsolete, and Japanese lucifer matches, which could be bought in the village two years ago, have gone out of use in consequence of the imprisonment for murder of the local Chinese trader. Live embers are often carried from house to house in cocoanut shells.

Among the household articles in common use we may mention a machine used for separating the seeds from cotton; were it not of a type common in the neighbouring East Coast States it would appear to demonstrate a higher degree of mechanical knowledge in the shaping of the cogs than might be expected at Sai Kau.

The weighing-beam may also be noted. In form it somewhat resembles the Scandinavian "bismar," having no moveable weights; but as no scale is marked upon the beam it is designed rather to weigh out a fixed quantity than to ascertain an unknown weight. No specimen of this type that we saw was adapted to weigh out more than two quantities, one a sixteenth part of the other, this being effected by the use of two fixed suspending strings.

REVIEWS.

South Africa. **Theal.**

Progress of South Africa in the Century. By George McCall Theal, D.Litt., LL.D. London and Edinburgh: W. & R. Chambers, Ltd., 1902. Price 5*s*. **87**

But little of this profoundly interesting book relates to anthropological studies. Two of the introductory chapters describe the Bushmen, the Hottentots, and the Bantu in general terms, including a sketch of their customs and institutions. A history of the dealings of the white population with them occupies of course a large part of the book. It is necessary to an understanding of the present position of the "native" races in South Africa. It does not, however, throw much light directly upon the problems presented by the social and religious institutions and the mental characteristics and attainments of the population. Yet to those readers to whom Dr. Theal's larger works are inaccessible, and who desire to gain an insight into the most difficult questions in South African politics, the story of the relations between the white and coloured peoples will prove of much value. The urgency of a thorough consideration of our future policy towards the "natives" is evident on the most superficial view of the facts. The Bantu race is "probably the most prolific on the face of the earth." Since its destructive wars were brought to an end it doubles its numbers every 25 years. The racial feeling on the part of the Bantu is very strong, and it seems to be aggravated by education. "To keep the large number of Bantu in order every possible effort," says Dr. Theal in his final chapter, "is made to treat them justly and kindly, and to interfere "no more than is prudent and necessary for their own good. So far it has always been "possible in cases of emergency to oppose one tribe to another, but their old feuds are "now rapidly dying out, and this system, even if it were advisable to continue it, can "no longer be depended upon. As they are subject to excitement and liable to commit "themselves to hostilities without any sufficient reason apparent to Europeans, it is "necessary to keep an armed force in readiness to suppress any outbreak before it has "time to spread." These statements emphasise the wisdom of an immediate inquiry upon scientific lines into the native customs and conditions, recently urged upon the Government by the Anthropological Institute and the Folklore Society. The war is now at last over, and it is to be hoped that some serious attention will soon be paid to the matter by the Colonial Office.

On the questions between the Dutch and English populations, fully treated in this volume down to the outbreak of the war, this is not the place to offer an opinion.

E. SIDNEY HARTLAND.

Philippines. **Koeze.**

Crania Ethnica Philippinica, ein Beitrag zur Anthropologie der Philippinen. Von G. A. Koeze. Haarlem: H. Kleinmann & Co., 1902. **88**

In MAN, 1901. 149, an abstract was given of the first part of Koeze's treatise on the crania of the Philippine Islanders, in which the general purport of the work was stated, and a summary of the characters of the tribe named Visayas was given. In this part the author completes the description, partially given in the first part, of the tribe known as *Igorrots*. The skulls examined some years ago by Virchow and ascribed to these people were mesocephalic with a marked tendency to be dolichocephalic. The twelve skulls measured by Koeze were in no instance actually dolichocephalic, seven were mesocephalic and five were markedly brachycephalic, so that the mean length-breadth index was 80·5. Nine of the twelve crania were hypsicephalic. The mean cubic capacity of the males was 1,460 c.c., of the females 1,335 c.c. The face was long, leptoprosopic. The nose showed much variety, the index ranged from 41·5 to 56·8, with the mean of 50·1. In four the nose was platyrhine, in four mesorhine, in three leptorhine. The general aspect of the face was prognathic, but in six of the skulls measured only two

were strongly prognathic, two were mesognathic, and two orthognathic. The type of skull in the Igorrots is regarded by Koeze as hypsimesocephalic, leptoprosopic, mesorhine, hypsophthalmic, mesognathous, and leptostaphyline. They are not pure Malays, though they have Malayan characters, such as the occurrence of brachycephalism. He regards them as being of an Indonesian type.

Koeze also examined thirteen crania of the *Ilocanos*, who occupy the provinces Ilocos Norte on the coast, Ilocos Sur, Abra, and La Union. They are mingled with the Igorrots. All the crania, with one exception, were brachycephalic, and the exceptional specimen had an index 79. The maximum length-breadth index was 88·3 and the mean was 83·8, which is the highest in the series of Philippine crania. Twelve crania also were hypsicephalic, the mean index being 78·6. The mean cubic capacity of the male skulls was 1,495, of the females about 160 c.c. lower. The face was usually leptoprosopic. Three skulls were prognathic, six mesognathic, four orthognathic. In eight skulls the nasal index was strongly platyrhine, three were mesorhine, and only two were leptorhine. Koeze makes the following general statement regarding these crania: brachyhypsicephalic, leptoprosopic, mesognathous, strongly platyrhine, mesoophthalmic, leptostaphyline. He considers them to be the purest stock of Malays in the Philippine Archipelago, although doubtless they have a measure of intermixture with other races.

Koeze gives a partial description of the crania of the *Tagbanuas*, a tribe as yet but little known to Europeans, but defers the remainder to the next part of his memoir. Both parts 1 and 2 are illustrated by a number of figures of skulls reproduced in phototype.

WILLIAM TURNER.

Crete. **Boyd Dawkins.**

Skulls from Cave Burials at Zakro in Eastern Crete. By W. Boyd Dawkins (in *Annual of the British School of Archæology*, 1900–1, pp. 150–155). London: Macmillan. 8vo. 10*s.* 6*d.* **89**

It is not often, we imagine, that the readers of the *Annual* of the British School of Archæology in Athens are confronted with a paper on skulls; but both the authorities and the supporters of that admirable institution are to be congratulated on the wide and liberal view of its scope which is exhibited in the current volume of its publications. With the elaborate, though still admittedly preliminary, monograph of Dr. A. J. Evans on his excavations in the prehistoric Palace of Knossos, and with Mr. Hogarth's archæological discoveries in the east of Crete we are not at the moment concerned; but it seems worth while to make prompt recognition of a brief but very valuable addition to our knowledge of Mediterranean man on his physical side, which is contributed by Professor Boyd Dawkins in his paper on *Skulls from Cave Burials at Zakro* (pp. 150–155, with Plate VI., reproduced, by permission, herewith).

The skulls in question, three in number, were found in caves in the steep sides of the Zakro gorge, which runs down in a sheltered cove on the east coast of the island, and contains numerous other traces of Neolithic (?) and Bronze Age settlements, which are described elsewhere in the volume. One of the skulls, apparently that of a woman, and very perfectly preserved, came from an untouched cist grave, showing contracted burial and containing a clay vessel of primitive style with incised rectilinear ornamentation. The others were from shattered cists hard by, and one of them was too fragmentary to be measured in full. All three skulls are typical examples of the common early Ægean type; with breadth index, ·752–·740; height index, ·691; alveolar index, ·900–·981; nasal index, ·480–·478; and orbital index, ·871–·815. These characters Professor Boyd Dawkins shows to be closely comparable to those of the skulls from Hissarlik, Menidi, and Cumæ (*cf.* those from Erganos in Crete, published, as the editor of the *Annual* notes, by Sergi in *Amer. Journ. Archæol.*, 2nd series, V .3, p. 315), and of some from the more

mongrel series from Hanai Tepe in the Troad (Virchow, *Abh. K. Ak. Wiss. Berlin*, 1882, p. 130 ff.), so that these skulls represent the "small dark Mediterranean people" who are aboriginal in Crete as in the other islands of the Mediterranean.

FIG. A.

FIG. B.

In contrast with this dolichocephalic series (of which the full details are given in tabular form, p. 152) Professor Boyd Dawkins collects details of nine examples of a quite distinct brachycephalic type with breadth index, ·782–·867, which is almost equally widely distributed in the Ægean, at Hissarlik in the Troad, Spata, and the Dipylon in Attica, Nauplia and Mykenæ in Argolis, and Antiparos in the Cyclades, and whose presence in the Troad is further indicated by the higher indices (·780, ·776, ·774) among the mixed series from Hanai Tepe already mentioned.

FIG. C.

FIG. D.

This brachycephalic series the author is inclined to correlate (with Sergi and Ripley) with the round-headed peoples of Central Europe; and to regard as intrusive in the Ægean area about the period of the introduction of bronze. In this event, the specimens from Hissarlik and Antiparos would be very early examples of its occurrence, for they both belong to strata of the earliest days of metal use, when mere impure copper was still far commoner than true bronze; and in view of recent speculations on the ethnological history of the Ægean, it will be important to keep in mind the existence of this evidence for a very early admixture, in these parts, of a non-Mediterranean type and not necessarily from the European side. J. L. MYRES.

Religion. Lang.

Magic and Religion. By Andrew Lang. London: Longmans, Green & Co., 1901. 8vo. pp. vii, 316. Price 10*s.* 6*d.* **90**

Mr. Lang is an indefatigable controversialist. Not content with having demolished the solar school of mythology he now turns his attention to the vegetarians—the Covent Garden school he happily designates them—and protests against the theory that the majority of the pantheon are only sublimated corn spirits.

The greater part of the present volume is an attack on Dr. Frazer's Sacæa-Zagmuk-Purim theory. Most anthropologists are agreed that Dr. Frazer's "light bridges of hypothesis" have broken down. Mr. Lang would probably have been more effective if he had not been quite so lengthy. The moral of the 130 pages devoted to the demolition of Dr. Frazer is, in brief, that complete monographic treatment of the component elements should precede the building up of gigantic hyphotheses like the *Golden Bough*. This moral is emphasised by the criticisms brought forward in a later chapter on the "Ghastly Priest," in which Mr. Lang dissents from Dr. Frazer's presentation of the facts with regard to the Golden Bough itself and the Grove of Nemi.

Mr. Lang's treatment of Dr. Frazer's theory of religion is less happy. The question is at the bottom an abstract one. Dr. Frazer has defined religion in such a way as to exclude from its scope certain mental states which Mr. Lang regards as religious. Criticism of Dr. Frazer's position would have been none the less effective for being entirely on abstract lines. Mr. Lang has, however, preferred to drag in Baiame and other "high gods" of Australia to enforce his point. His object in so doing is a double one; he wishes first of all to refute Dr. Frazer's "selfish" theories of the origin of religion by showing that there are gods who receive neither prayer nor sacrifice, and secondly to put forward once more his own hypothesis that the most backward races known to us have, by the light of reason, arrived at a conception of a higher power who sanctions conduct, and is a father, and a loving one, to all mankind. Now, Mr. Lang admits that Twanyirika, the great spirit of the Aruntas, is very probably nothing more than a bugbear invented to keep the women and children in order. Inasmuch as the knowledge of many of the other "high gods" was religiously kept from the women, the unsophisticated mind would be disposed to come to the conclusion that they, too, were originally bugbears. If, therefore, any Australian gods do answer to Mr. Lang's description above quoted it is at most a mere hypothesis that they were in the beginning anything more than bugbears. Dr. Frazer is attacked for transforming his hypotheses into axioms. In the case before us Mr. Lang's hypothesis, when it appears before us, is already in the axiom state. He does not even consider the possibility that the "high gods" are, or were, mere bugbears. But, in the absence of proof that they are not bugbears, Mr. Lang's criticism of Dr. Frazer is harmless. A bugbear god is, perhaps, not foreseen in Dr. Frazer's statement of his theory which affirm the "selfish" origin of religion but the belief in one in no way invalidates the theory; a bugbear god cannot well have been created for any but selfish ends. If Mr. Lang has not succeeded in shaking Dr. Frazer's position in this portion of his argument he has also not done anything to strengthen his own position. It is no part of his theory that a bugbear has been evolved into a moral and benevolent governor of the universe; but his own statements suggest that the "high gods" of Australia have come into being by this process.

There is no denying that a certain glamour is cast over an author's theories if he puts them forward in a wholly different controversy in which he himself is in the right and his opponent in the wrong. There is another side to the chapter under discussion, and here Mr. Lang scores. As we have already mentioned, the question is at the bottom one of definition. Most people will be with him in his criticism of Dr. Frazer's definition of religion. But it is one thing for a critic to be right on the general issue and another thing for his arguments to be free from fallacies. If Dr. Frazer is wrong it does not follow that Mr. Lang proves it by his arguments, still less does it follow that Mr. Lang, in overthrowing Dr. Frazer, proves his own position to be right. In the interests of truth it is unfortunate that Mr. Lang should have been successful in giving a different impression; from his presentation of the case it might be imagined that, the "selfish" theory done with, nothing remains but to believe in the "high gods."

Into the question of the "otiose creator" in America and elsewhere space will hardly permit us to enter at length. It would be interesting to learn what Mr. Lang means by speaking of the "cult" of Ahone and other beings who receive neither prayer nor sacrifice. Mr. Lang might be asked to show that these beings are anything more than mythological Mrs. Harrises, invented to explain how things came to be; even if they are something more they need stand no higher than the coyote and other animals who figure as creators in savage myths. Or will Mr. Lang, who insists in the value of contradictory instances, tell us that the latter myths are not religion?

In the chapter on "Taboos—Firstfruits," we have a curious sidelight on Mr. Lang's views on totemism. Savage tribes must have had names, he says (but why so universally animal names, we may ask?). The name suggested a mystic connection between clan and animal. This mystic connection was explained on the theory of kinship, and common decency suggested that it was improper to eat the animal relative. This theory of Mr. Lang's does not appear to explain much; but it may be noted that it assumes the local totemism of the Arunta to be the primitive form. But the singular thing about his theory of totemism is that it appears in a chapter the main point of which is that the eating of firstfruits is not ritual; among the Arunta the eating of the totem of the clan was, according to Mr. Lang, merely a sign that the close season for the totem animal was over; it was not a religious ceremony. In Mr. Lang's view, therefore, "common decency" does not prevent the totem clan from committing cannibalism once a year in cold blood, merely *pour encourager les autres* and as a sign that the close time for their relatives was over. Is this really Mr. Lang's ideal of social morality?

The book contains other chapters, some intimately connected with the main theses, some remotely and some not at all. Miscellanies of this sort can hardly be anything but ephemeral literature. Perhaps, too, if Mr. Lang were a little less fond of a running fight with any adversary who comes across his path the net result of his works would be greater. It would certainly be easier to judge of the precise value of his criticisms and his theories.

N. W. T.

Egypt. **Wiedemann.**

The Realms of the Egyptian Dead. By K. A. Wiedemann, Ph.D., Professor of Egyptology in the University of Bonn, No. I. of "The Ancient East" Series. **91**
London: David Nutt, 1901. Pp. 84. Price, 1*s.*

The "œuvre de vulgarisation" has not hitherto found much favour in Germany, the land of the "Gelehrter." But the publication of the series "Aus dem alten Orient," of which "The Ancient East" series, now being published by Mr. Nutt, is a translation, shows that the idea of popularisation has at last "caught on" in Germany. The English translations of the German originals are announced as "a series of short, popular, but "thoroughly scientific series by the leading scholars of Germany, setting forth the "recent discoveries and investigations in Babylonian, Assyrian, and Egyptian history, "religion, and archæology, especially as they bear upon the traditional views of early "Eastern history." The first volume amply bears out this description. Professor Wiedemann is the first German authority upon Egyptian religion, and his conclusions are the more valuable from the fact that he is a conservative scholar, and is by no means prone to the fault of constantly running after some new thing. The anthropologist especially will find his little book very useful, as Professor Wiedemann has, in a short compass, succeeded in briefly touching upon almost all the points of Egyptian belief which are of most importance from the anthropological point of view.

The following passage may be especially commended as giving a most admirable summary of the main peculiarities of Egyptian religion (p. 17):—". . . the entire "absence of systematic thought that characterised the Egyptians . . . permitted "them to write and to believe the most contradictory doctrines at one and the same time.

" They never made any attempt to put their own religion into systematic form, to reject " what was contradictory to the main dogmas, and to make these consistent with one " another. On the other hand, they faithfully retained all that their ancestors had once " believed, together with all that later generations had added, untroubled by the various " modes of thought that existed side by side and mingled together. In this religious " conglomerate the people received first all the various local cults which, arising from a " common basis, had in different city and village temples gradually attained an indepen- " dent and often very peculiar development. There remained also the ancient faiths in " their original forms as once held among the various tribes from which the Egyptian " people had sprung in primitive times, so that primitive Semitic, primitive Lybian " (*sic !* presumably a fault of the printer), and many other conceptions present themselves " side by side in bewildering variety. Nor is this all. Within historic times many " systems of religious thought were borrowed from neighbouring nations and added " without modification to the Egyptian stock, so that the Semitic Baal and Astarte, " together with their companion deities, found equally accredited places alongside the " native gods of Egypt. It was long believed that this confusion of religious ideas was " to be found in later texts only. Since the inscriptions in the pyramids of the Fifth " and Sixth Dynasties have come to light we know that this chaos is as old as any " literary Egyptian tradition. No doubt it must have come about gradually, but the " period of its development lies beyond our knowledge of the Egyptian people. Hence " it seems useless to indulge in hypotheses regarding its course, which may be shattered " by any stroke of a spade, any new discovery of a text. In the present state of our " knowledge a cautious student will confine himself to stating the separate dogmas, " examining their changes during Egyptian history, and inquiring (*sic*) into their " meaning. The question of their origin and of their age is better left on one side."

Professor Wiedemann has, however, left undiscovered two points which are closely related : the henotheistic tendency of the Egyptian worshipper, which is evident in many hymns and prayers, though not in the volume of garbled and misunderstood spells which we call the Book of the Dead, and the undoubted existence of an Egyptian idea of *τὸ θεῖον*, *p-nutir*, a divine unity underlying the confused crowd of gods, and give us an idea which often rises to the height of a monotheistic tendency. It may further be very much doubted whether the hymn quoted on p. 8 can really be taken to imply the existence of an Egyptian deluge-tradition. The sentence, " The lands would be [even " now] the dominion of the flood (*sic*, a badly-chosen word) were they not under thy " sway " refers simply to the primeval watery chaos, not to a " flood."

The translator's work has been well done, but the bibliography is incomplete : Dr. Budge's recent books on " Egyptian Religion " and " Egyptian Magic " are not mentioned, for instance. H. H.

Arabia.

Reise nach Inner-arabien, Kurdistan und Armenien, 1892 . By Baron Edward Nolde. pp. xv–272. Brunswick : Vieweg, 1895.

Nolde. **92**

It is somewhat late in the day to notice this book. Our excuse must be that it is so little known in this country. The Royal Geographical Society does (or did recently) not possess a copy, and the present writer, though aware for some years of the outline of Nolde's achievement, has never seen his final account till now. Nolde was the last European to reach High Nejd, and his account of his visit to Hail and Mohammed ibn Rashid's camp in the spring of 1893 alone breaks the silence which has brooded over Central Arabia since Huber's murder in 1885. Now that European attention has once more been turned thither by the warfare of Mohammed's nephew and successor with Kuweit, and most recently by the news that Riadh has once more freed itself from Hail, from which event will result in all probability a revival of Wahabism,

we may be allowed to dwell a moment, however belated, on the only Western report made on the country at first hand for nearly 20 years.

Nolde. who had been a volunteer in the Carlist and Chilian Wars, besides fighting for his own country in 1870, set out from Damascus on New Year's Day, 1893, for Hail. He travelled very much *en prince*, in fact, like a great noble of the Middle Ages, himself mounted on a superb Arab steed, to which he often refers as having gained him distinguished consideration in the eyes of every Nejdean. His personal retinue was 36 men, and his Turkish escort as far as the frontier at Jauf consisted of 25 troopers. Some 70 camels bore his attendants and baggage. This was no doubt the way to gain the heart of the great Bedawin Emir, and secure such a reception as no previous European had ever experienced at his hands; but it was not the way to share Arab life or come very near the people.

Nolde travelled by Bozra and the Wadi Sirhan to Jauf without incident. There he had some difficulty in convincing the Emir's lieutenant, the ex-slave Johar, of his *bona fides*, but on sending back his Turkish escort was received, well entreated, and shown a new way across the Nefud, easier than that taken by Palgrave and the Blunts. On this route water is last drawn from the pool of Hoa, some 40 miles S.E. of Jauf, and found again at the Emir's fort of Haianieh, about 180 miles distant. This desert tract was passed in five days' march, during which a heavy snowfall was experienced. Immense herds of camels, belonging to the Roála, were found grazing about Haianieh, proving the hold that the Emir of Hail then possessed over this great tribe. In fact, more than one branch of the Anazeh was helping him at that moment to suppress the revolt of the Wahabite oases and Bedawins of Southern Nejd.

Arrived at Hail, Nolde found the Emir absent, and had some trouble at first with his viceroy, Hamud. Latent Wahabism tended to show itself in face of the *giaur;* but the fame of his horse, the advent of rain, news of a great victory of the Emir, and, finally, a cordial invitation received from the latter, set things right, and the stranger was even invited into the Hail mosques and schools. After a short stay, he proceeded through Kasim to the Emir's camp between Aneiza and Riadh, and some 40 miles from the latter. There he was treated as his own Emperor would like to have been treated, and saw all the chivalry of the desert and the greatest army of Shammar, Anazeh, and Harb warriors ever collected. After 10 days of constant intercourse (through interpreters, presumably) with the Emir, Nolde was sent on his way rejoicing to Meshed Ali, Kerbela, and Bagdad.

He thus had a great opportunity; but not only the way in which he elected to travel but his own predilections did not dispose him to use it to the best advantage. Arms, rather than the man, interested him; if the latter at all, then mainly in his military aspect. Of the Arab horse and the camel he made some study, as noble beasts for war. Of manners and customs of the people, either in the waste or in the oases, we hear very little, and of that little not all is credible. For instance, the stories of the prohibition of smoking in Hail do not tally with what we know of its anti Wahabite spirit, and sound like interpreters' scares. Though desert travelling is monotonous, it is not so devoid of incident and interest as Nolde found it. But it is evidently not merely his sympathy that was there at fault, but his eyes and his power of description. A Crusader could hardly teach us less in proportion to the ground he covered.

We have to thank Nolde, then, so far as concerns Arabia, for some account of Hail in 1893, containing, however, nothing new; for a passing notice of Aneiza, a description of a Bedawin war camp on a great scale, a superficial study of the greatest Arab of the century, and some light on the course of Central Arabian history as exemplified in the struggle of the oasis religious spirit with the Bedawin indifferentism of Jebel Shammar, but for practically nothing else; and, when he is come to Kurdistan, for the local history of the wars between Turkish soldiery and the Hamawand robber hordes. That he should

have passed through so much and told us so little about it is much to be regretted, but we have to do evidently with an extreme type of an adventurer, who was insensible to quieter interests than fighting and kept moving meteorically from one intense personal excitement to another, till the end came by his own hand in London in 1895. D. G. H.

Mythology. **Hewitt.**

History and Chronology of the Myth-making Age. By J. F. Hewittt, late Commissioner of Chutia Nagpur. London: James Parker & Co., 1901. Pp. xlvii + 682. Price 15*s*. **93**

Those who have studied the author's previous work, *The Ruling Races of Prehistoric Times*, will know what to expect from this volume, which is, in the main, a restatement of his views. Like George Eliot's Mr. Casaubon, he has a theory which attempts to co-ordinate and explain all the mythologies of the world. This is a task which obviously requires qualifications different from those which Mr. Hewitt possesses; in fact, it is quite certain that with our existing knowledge such a synthesis as he attempts is not possible. Further, he does not possess that grace of style and capacity for a well-ordered statement of his conclusions which would render the argument intelligible.

The main position appears to be that the village community and ultimately much of the world's social economy and mythology took its origin from the Dravidian forest tribes of Central India. The early beliefs of these people are said to have started with the worship of "the Pole Star in the North and the central starless void in the South," and they began their year with the time when the Pleiades first set after the sun on 1st November. Then followed an age of "Lunar-Solar" worship, the world being regarded as "an egg laid by the great cloud-bird," and apparently this cosmogony was introduced by immigrants from India to the valley of the Euphrates, where they joined forces with the Ugro-Finn races from the north.

These conclusions, and much more of the same kind, rest on a series of explanations of the names of gods and analogies of myth and ritual, much of which is obviously disputable. In fact, all speculations such as these which assign the development of the world's culture from one definite area are open to the gravest suspicion. It seems more reasonable to suppose that human nature being much the same everywhere, the first gropings after a social and religious life may have taken place indefinitely on more or less analogous lines.

But though Mr. Hewitt's method may be mistaken, it is impossible not to admire the courage with which he has attempted the solution of a problem such as this, and the ingenuity with which he has reared so vast a fabric on such very slender foundations. He has a good practical knowledge of the forest races among which a large part of his life was spent, and if he would abandon for the time the attempt to find a "key to all the mythologies," and devote himself to a monograph on the social and religious life of those little-known people, he might produce a work of permanent interest and value.

W. CROOKE.

PROCEEDINGS OF SOCIETIES.

Proceedings. **Anthropological Institute.**

Summer Excursion to Cambridge.—On Saturday, July 5, at the invitation of Dr. Haddon, the President, the Fellows of the Anthropological Institute visited Cambridge. Visits were paid to the Fitzwilliam Museum, the Museum of Archæology and Ethnology, where the members were received by Baron Von Hügel, and the Anatomical Museum. After tea in the Fellows' gardens at Christ's College, a visit was paid to the Torres Strait and Sarawak collections, brought home by the Cambridge Expedition to the Torres Strait. The Fellows then dined together in Christ's College Hall. **94**

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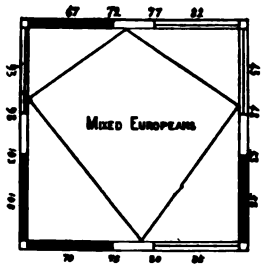
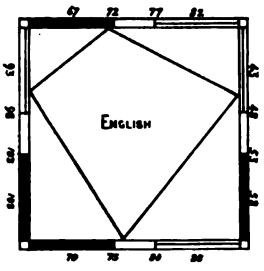
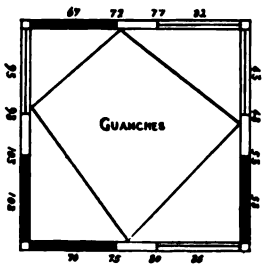
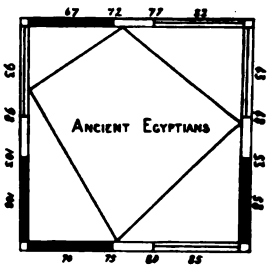
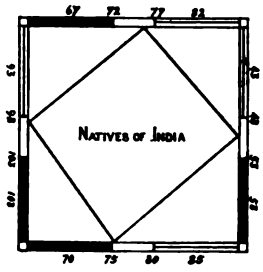
VERTICAL INDEX

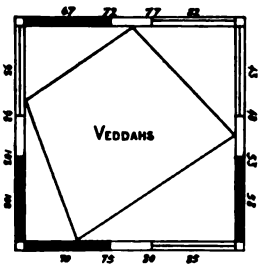


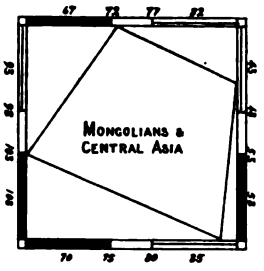


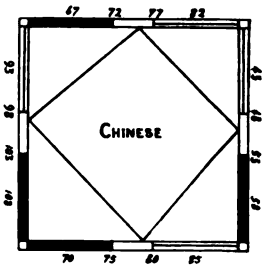


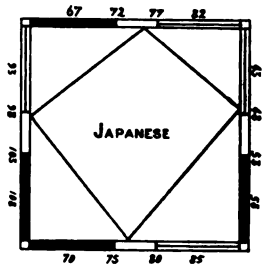


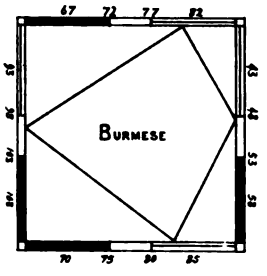


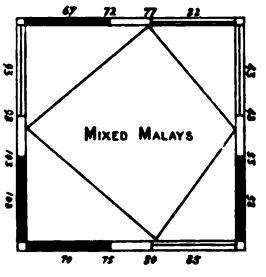


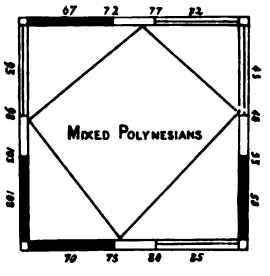






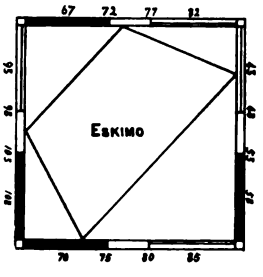


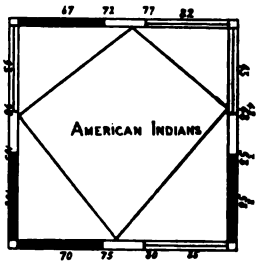


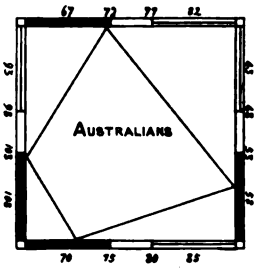


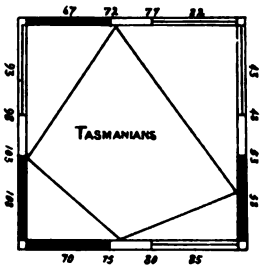
ALVEOLAR INDEX

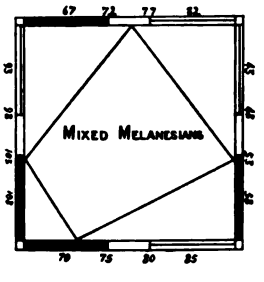
NASAL INDEX

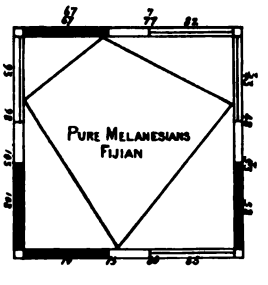


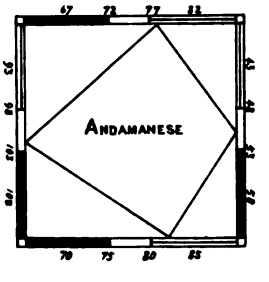


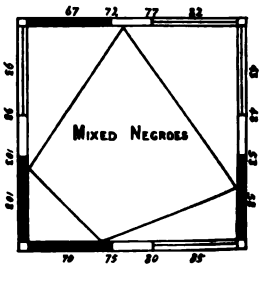


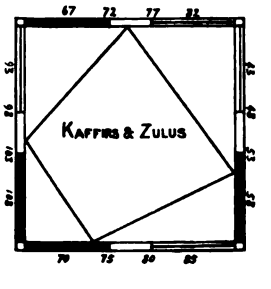






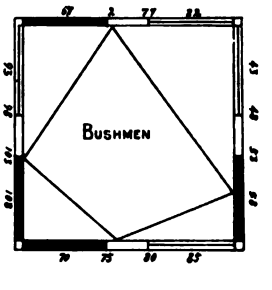






THE TOPS OF THE SQUARES REPRESENT THE VERTICAL INDICES
- BOTTOMS - - - - CEPHALIC -
- LEFT SIDES - - - - ALVEOLAR -
- RIGHT SIDES - - - - NASAL -

GRAPHIC REPRESENTATION OF SIR W. FLOWER'S TABLE IN THE CATALOGUE OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.



CEPHALIC INDEX

ORIGINAL ARTICLES.

Method. With Plate I–J. Thomson.

The Use of Diagrams for Craniometrical Purposes. *By Arthur Thomson, M.A., Professor of Human Anatomy in the University of Oxford.* 95

The highly ingenious and suggestive paper by Professor Flinders Petrie which appeared in MAN, 1902. 61 (with Plate F.), is of especial interest to me, since I have been working along somewhat similar lines, and have obtained results which were submitted to several of my colleagues prior to the publication of the paper above referred to.

As any attempt to interpret or simplify the elaborate statistics which now cumber the field of craniometrical enquiry is not only desirable but absolutely necessary before we can report further progress, it becomes a matter of much importance to devise some method by which this object can be attained.

With this intention Professor Petrie has suggested a system in which he represents, by means of triangles, the variations in the indices and capacities of the skulls which are under examination. These triangles are constructed on fundamental equilateral triangles of which the radii, though actually of equal length, are, in the application of this method, supposed to represent the various measurements of skull length, breadth, and height, which are assumed to be of the mean value of 183 mm., 140 mm., and 135 mm. respectively. The extremities of these radii, which correspond to the angles of the fundamental equilateral triangles, are taken as the zero points, to which or from which are added or subtracted the absolute measurements of the variations in these dimensions; or, as Professor Petrie expresses it, "The variations greater or less than these "means are plotted on the *actual living size* (the italics are mine) inside or outside the "points of the equilateral triangle." The reason for doing so is, as he explains, to render the variations more distinct by not representing the total dimension, but only the variation on each side. Professor Petrie then states that the whole area of these triangles varies *with* the capacity of the skulls. Such, no doubt, is the case; but be it noted that this statement is not the equivalent of saying that they vary *as* or *in proportion to* the capacity of the skull, although such a conclusion is certainly suggested by the opinion subsequently expressed, "That this triangle shows not only the three dimensions but "also . . . the capacity sufficiently for all practical purposes." The truth is, the figures represent a comparison of *differences*, not of *absolute values*, and for this reason I am inclined to regard the results as not only misleading but open to criticism.

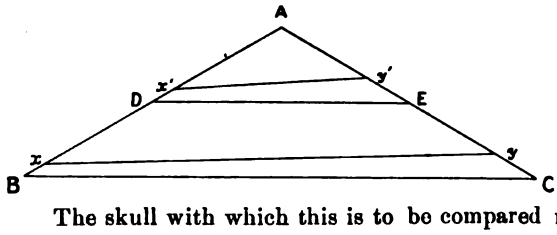
To illustrate the misleading nature of the diagrams it is only necessary to refer to Figs. 3 and 4 (Plate F. and p. 83), where anyone who compares the size of the triangles there set out cannot fail to be struck with the remarkable differences in size between the triangles representing Anglo-Saxon, French, English, and Italian skulls, and those illustrative of such races as the Andamanese and the natives of India. The cranial capacity of mixed English as stated in *Flower's Catalogue of the Collection of the Royal College of Surgeons of England* (the source from which Professor Petrie himself derives his figures) averages 1,151 ccm., that of the Andamanese is given as 1,266 ccm., thus showing a difference of only 245 ccm. between the averages of the two races. If, however, we are to gauge the cranial capacity of the two races from a comparison of the sizes of the triangles representative of each group, as figured in the plate, we would be bound to conclude that the average capacity of the English skull was quite three times that of the Andamanese, to judge by the areas of their respective triangles—a conclusion which is surely justified by the Professor's own statement, that the triangles display the capacity of the skulls they represent "sufficiently for all comparative purposes."

It may here be pointed out that Professor Petrie gives us no standard of size for the drafting of the fundamental triangles, so that any observer who wishes to make use of

this method, for expressing his own results, will find himself at a loss to know of what size to construct his figures, for, unless the constant in each radius is the same throughout the whole series, the variations represented by the addition or subtraction of the absolutes will not be comparable. Although Professor Petrie states that he does not show the total dimensions, yet he does not tell us what proportion, if any, he employs. To obtain anything like accurate results the measurements of the variations must of necessity be plotted on the radii in proportion to the mean employed, though of course such a procedure is open to the objection that the characteristics displayed by the skulls are not rendered so apparent to the eye.

Further, we are led to believe that the indices of length-breadth, length-height, and breadth-height are expressed by the slope of the sides of the triangle. The sides of the triangle, therefore, or their slope, which practically comes to the same thing, indicate a proportion, *i.e.*, an index; but the sides of the triangle vary with the length of the radii, and since, as will be shown presently, the radii are not proportionate, the estimation of the index by this means is erroneous.

This may be proved as follows:—Take the triangle ABC, of which the sides AB and AC each measure 120 mm., and include at A an angle of 120°.



AB represents the mean skull length, 183 mm. (*see* MAN, 1902. 61, page 82).

AC represents the mean skull breadth, 140 mm. (*ibid.*, page 82).

BC represents the mesocephalic index.

The skull with which this is to be compared measures 173 mm. long and 120 mm. broad, yielding a difference in millimètres between the mean of length 183 mm. and the absolute 173 mm. of 10 mm. Similarly the difference between the mean of breadth 140 mm. and the absolute 120 mm. is 20 mm. From the zero points B and C these measurements of the variation must be subtracted from the radial length, giving the points x and y, the slope of the line xy representing the index. If, now, the sides AB and AC of the triangle ABC be halved, the sides AD and DE of the triangle ADE will each measure 60 mm. in length. D and E are now taken as the zero points from which the measures of the variation in the dimensions of length and breadth are plotted on the radii yielding the points x' (10 mm. from D) and y' (20 mm. from E) respectively. The slope of the line $x'y'$ is supposed to represent the index, but in the triangle ABC the distances xB and yC form respectively proportions of one-twelfth and one-sixth of the length of the radii AB and AC. In the triangle ADE, however, the distances x'D and y'E form respectively proportions of one-sixth and one-third of the radii AD and AE. Such being the case, the triangles A$x'y'$ and Axy are not similar, and thus the lengths xy and $x'y'$ are not parallel, since the sides of the triangles of which they form the bases are not proportionate; in consequence the slope of the base, being determined by the lengths of the sides or radii, cannot be taken as an accurate estimate of the index unless the absolute measurements taken from or added to the sides of the triangle are proportionate to the lengths of the assumed radii.

For these reasons it seems to me that until Professor Petrie modifies his system there is little chance of its universal adoption, since the results obtained by its use can hardly be considered reliable where accuracy is desired.

The method which I have been employing has for its object the collation of certain facts which, in the past, have either been expressed independently, or if compared, the comparison has been effected by means of curves, numerical averages, medians, or types. Hitherto a difficulty has arisen whenever it became necessary to compare more than two factors, and anyone who has had much to do with the measurement of skulls knows full

well that it is almost impossible to carry in one's mind a clear appreciation of the varying values of the several indices. Even when these indices are grouped so that descriptive terms may be employed, instead of giving them a numerical value, it yet remains a difficult matter to form a clear conception of the shape of the skull from the terms employed. It occurred to me that if some graphic form of comparison could be adopted the mental process whereby these measurements and indices were compared might be agreeably simplified. After considerable experiment I found that the method here described was the most convenient. Whilst I find it useful for my own purposes I must leave it to others to judge whether it may prove generally serviceable.

On millimetre paper, or, if that cannot be obtained, on ordinary surveyor's paper (which is ruled in squares), construct a square. The sides of this square are each taken to represent the range of whatever indices are chosen for the purposes of comparison. Thus, supposing we wish to compare the cephalic, vertical, alveolar, and nasal indices of several series of skulls, we assign a side of the square to each one of these indices. The length of the side is then measured off to correspond with the range of the index with which it agrees. Thus, if we assign the lower side of the square to the cephalic index we may divide it up into 25 or 30 parts ranging in numerical value from 60 or 65 to 90, thus covering the probable range of the index. Similarly the upper side of the square may be allotted to the vertical index, whilst the sides may be assigned to the alveolar and nasal indices respectively, the range of variation being estimated by the numerical values of the extreme indices. It will further be found a matter of some convenience if the meso-indices are made to correspond to the middle fifth or so of the sides of the square; in this way we can conveniently subdivide the sides of the square into three parts, each corresponding to the lower, the meso, and the higher indices of the four series of indices, in conformity with the descriptive terms commonly employed to signify these subdivisions.

If we are comparing a series of skulls we may take the arithmetical mean, the median, the maximum of frequency or "type" of each of the indices which we have chosen. (Let me here express my preference for the "type," by which I mean the index which recurs most frequently in a given series, this does not necessarily correspond to the "median," though frequently they closely agree; and to my mind is preferable to the arithmetical mean, which is so apt to give misleading results, owing to the inclusion of extreme examples.) Having made the selection according to individual taste, or the data supplied in the tables we are analysing, then mark off on each side of the square the numerical point which corresponds to the averages, medians, or types. By connecting these four points by four lines a quadrilateral figure is formed disposed within the square—the shape of this figure necessarily depends on the position of its angles and the lengths of its sides, which are determined by the position of the points which have been plotted on the sides of the square.

Much, of course, will depend on the indices selected for comparison, and the resulting figures will vary accordingly. Experience alone can teach us which are the indices of greatest ethnic value, and in making any such selection it will be well to choose only those which display the greatest racial constancy. There is no reason why a greater number of indices might not be compared by increasing the sides of the including figure so as to form a pentagon, hexagon, or other equi-sided figure; but this temptation must be avoided, since my experience is that the more complex the figure becomes, the less the eye can take in the variations and the greater becomes the difficulty of retaining a mental picture of the result. I had hoped that by placing two squares together, and thus forming an oblong, it would have been possible to construct a six-sided irregular figure within the oblong, the upper part of which would display the variations in cranial form whilst the lower part would serve to indicate the differences in facial shape, but I was reluctantly compelled to discard this arrangement for the reasons above stated. It would seem better, then, to construct a series of simpler figures within squares, varying,

it may be, the indices selected, than attempt to show too much in the same figure by rendering more complex its form. In order to illustrate this method I have taken the well-known table prepared by the late Sir W. Flower and published in the *Osteological Catalogue* of the Royal College of Surgeons. This I have rendered in graphic form, selecting for representation the cephalic, vertical, alveolar, and nasal indices simply because they came first in the lists of indices given. The results are embodied in Plate I–J. For purposes of comparison the range of the indices which are more commonly associated with lower types is rendered in solid black, whilst the meso-indices correspond to the clear spaces in the middle of each side of the square. As an inspection of the plate will show, the figure contained within the square generally assumes a wedge-shaped form. Thus in the white races the wedge is so disposed that its narrow end is directed upward and to the left, in the yellow races upwards and to the right, whilst in the black races it is turned downward and to the left. As will be seen, there are intermediate forms suggestive of a fusion of different stocks. Without entering now into the question of hybridity, it is certainly curious that by taking a median between the type of figure representative of Burmese and that of mixed Negroes we get an outline closely resembling that of the Andamanese; whilst by compounding the Guanche type with that of the mixed Mongolian the resulting figure recalls that of the mixed Malay. It is, however, as a ready means of comparison between different series that I have found this method useful, for it enables us more readily to recognise affinities which a mere inspection of the tables may have failed to demonstrate; and it seems to me not improbable that by adopting some such method as this, and plotting out the various types on a map, we may, perhaps, be able to follow streams of migration in different directions by noting the constancy of the type, and observing also where by confluence with other stock intermediate forms have arisen.

ARTHUR THOMSON.

Ægean. Myres.

Note on an Ægean Vase in the Salford Museum. *By John L. Myres, M.A., F.S.A.* **96**

The subject of this note is a one-handled jug standing about 7 in. high (Fig. 1), which is exhibited in the Royal Museum, Peel Park, Salford. It is of a rather coarse, ill-refined clay, in colour between cream and pink, hand-made, and covered with a pale cream-white slip, on which are painted a few bands and simple curvilinear ornaments in a lustreless umber paint. The spout is a little chipped at the end, but otherwise the vessel is in good condition.

FIG. 1.—ÆGEAN VASE: SALFORD MUSEUM.

The clay fabric, style, and ornamentation of the vase identify it as a good example of the graceful "Cycladic" style which precedes, in the South Ægean, the full-flown "Mycenæan" art, and is well illustrated by the contents of the prehistoric settlement in Thera (Dumont, *Céramiques de la Grèce propre*, Vol. I., p. 29 ff. Plate II.), and by the later prehistoric cemeteries of Amorgos (Dümmler, *Athenische Mittheilungen*, XI., 1886, Beilage i., II. Blinkenberg, *Antiquités Premycéniennes*, p. 31, Fig. 10 (esp. Nos. G. 1, 2, 5)), Syros (Pappadopoulos, *Révue Archéologique*, 1862, p. 244 ff., and specimens in the National

Museum, Athens), Siphnos (Tsountas, *Ephemeris Archaiologiké*, 1899, Plates 8, 9), and other islands of the Cycladic group.

Though in itself merely typical of one of the commonest and most characteristic vase-forms of its period, the Salford example deserves separate notice for two peculiar circumstances. The first is that, though its *provenance* is not known for certain, it reached Salford in a miscellaneous collection of definitely South Italian origin, and is the only object in that collection which might not quite easily have been acquired on any South Italian site. This, of course, by itself proves nothing, but it is remarkable that this is the third vase, to my knowledge, which has come to light in a South Italian collection. The others are:—(1) The vase in the Louvre (*Salle D.* 5), which was definitely acquired in South Italy; (2) the vase in the Fitzwilliam Museum in Cambridge, which comes from the Leake collection, has a similar history, and is retained by Prof. Ernest Gardner in the Italian section (*cf. his Cat. of Vases in Fitzw. Mus.*).

All three vases are of almost identical fabric and of very similar ornamentation, and the inference is strongly suggested that they may really come from some hitherto unknown site or sites and may represent Ægean exports of prehistoric date. That such exportation did occur is known already from examples even further afield, at Syracuse (Orsi, *Monumenti Antichi*, II., Plate i., 8) and at Marseilles (Dumont, *Bulletin des Correspondances Helleniques*, VIII., p. 188, Plate xiii.). The latter vase is in the Marseilles (Borély) Museum, No. 1321, and is of the same general form as the three Italian specimens. And, besides these actual exports, a whole series of vase-forms, both in Sardinia (*Mon. Ant.* XI., Plate xviii. 16, 18) and in upper Italy (*e.g.*, vases from Falerii (unpublished) in the British Museum), suggest definite contamination with Ægean "Cycladic" forms.

FIG. 2.—FULL SIZE.

The other noteworthy detail about the Salford vase is the occurrence, immediately below the lower root of the handle, of the symbol represented herewith (Fig. 2) deeply and vigorously incised in the clay while still wet. Both the symbol itself and the style of incision have every appearance of belonging to the linear variety of that "Ægean script" which has become so famous recently through the researches of Mr. Arthur Evans at Knossos; and, though it cannot at present be deciphered and is at the best but a potter's memorandum or a mark of ownership, it is of some importance here as additional evidence that we are dealing not with an independent Italian fabric or with a local imitation, but with a genuine export from the Ægean.

J. L. MYRES.

Stonehenge. Lewis.

Stonehenge: An Enquiry respecting the Fall of the Trilithons. 97

By A. L. Lewis, F.C.A., Treasurer of the Anthropological Institute.

The fall of the central trilithon, of which the leaning-stone formed one upright, has generally been attributed to the digging of the Duke of Buckingham in 1620. This seems to have been the opinion of a certain Mrs. Trotman who lived at a farm at West Amesbury, and who communicated it to Aubrey about 1665. Aubrey, having no reason to doubt her statement, believed and published it, and it has been believed and published ever since. The trilithon was, of course, as likely to have been upset by the Duke of Buckingham as by anybody else; but, as a matter of fact, it was not, as the views I have now to show will prove.

The upper view is photographed from a copy carefully taken by me from a drawing in a manuscript book now in the British Museum, bearing date 1588, and numbered Sl. (Sloane) 2596. It is called *The Particular Description of England, with the Portraitures of certaine of the Chieffeste Citties and Townes*, and was written by W. Smith, Rouge Dragon, who is stated to have died in 1618. This view shows four objects which are probably intended for barrows, and the spire of Salisbury Cathedral, and a building on a hill, perhaps intended for Old Sarum, the ditch is represented as being close to the stones instead of a hundred feet away from them, and there are fewer of the latter in some places than now exist; yet, badly as they are drawn they can mostly be identified, and in particular the leaning stone and other fragments of the great trilithon, although they are placed in an entirely wrong position.

FIG. 1.—VIEWS OF STONEHENGE.
A. *Sloane MS.* 2596. B. *Gough-Camden.*

Camden is said to have copied a drawing of Stonehenge signed "R. F., 1575." This drawing I have not seen, but it is reasonable to suppose that the plate in the 1607 and 1610 editions of his *Britannia*, which I have seen is copied from or founded upon it. That plate is very much like the lower of the two views shown here, but is not so good or clear, but with the help of this the leaning stone can be identified upon it. In Gibson's edition of the *Britannia*, dated 1695, an enlarged and somewhat more artistic view of the plate of 1610 is given, in which the leaning-stone is omitted altogether, although, on any supposition, it had then been leaning for three-quarters of a century; but a curious mistake in the outer circle is repeated. The lower view given here is from Gough's edition of Camden's *Britannia*, dated 1806, and is there said to be altered from Camden and Gibson. It is, perhaps, a pity that Gough did not copy Inigo Jones's view, which is a very good one, but I suppose he wished to adhere as closely as possible to Camden and the view before us has not only been altered from those of 1610 and 1695, but altered for the better, for the mistake which occurred in them has been eliminated, and the leaning-stone which Gibson omitted has been restored, although in this, as in the view of 1588, it is made to lean the wrong way. The fact that it is so drawn in both shows that it is the leaning-stone and not any other that appears in Smith's view of 1588, and that, instead of the fall of the great trilithon having been caused by the work of the Duke of Buckingham in 1620, it had certainly fallen some time before 1588, and probably before 1575.

Someone writing in the *Times* of April 9, 1901, stated, upon what authority I know not, that a catastrophe occurred at Stonehenge in the 16th century, at a date not ascertainable, but before the year 1554. The fall of the great trilithon may have been the catastrophe referred to, and may have been the result of some unrecorded researches under the "altar stone" in the reign of Henry VIII., when diggings were made in the neighbourhood, and, as Camden tells us, "there was found neere this place a table of "mettall, as it had been tinne and lead commixt, inscribed with many letters, but in so "strange a character that neither Sir Thomas Elliott nor Lilye, Schoolmaster of "Paules, could read it, therefore neglected it."

It is worthy of note that in all these views the only stone now standing of the north-western trilithon is the only stone represented as standing when they were made,

and that by bad drawing it appears to belong to the outer ring; but that trilithon had evidently also fallen before these views were taken, and it is possible that both it and the great trilithon fell many centuries ago, though whether at the same time or not is uncertain.

A comparison of these old views with the plan and views of Inigo Jones (1620–1655) leads to the conclusion that the south-western part of the outer circle was nearly as incomplete 300 years ago as it is now, and so far tends to support the idea that it may never have been completed at all. A. L. LEWIS.

Uganda: Folklore. Millar.

On the Slaughter-place of Namugongo, Uganda. *By Tefiro Kisosonkole. Translated, with Notes, by the Rev. Ernest Millar, M.A., F.Z.S.* 98

Now King Kyabagu* had a son named Bengo, who became very strong, and his father wished to kill him, but could not find anyone to do it as they thought the king was jeering at them when they were told to kill his son.

But afterwards a man named Kikabizi consented to kill Prince Bengo. He was only a poor man of Kago's,† and lived at Buwate; and he took him. When they got to the stream Katabusolo the Prince Bengo threw into it his bracelets, and to this day the river is called "the river where the bracelets were thrown away," and the executioner took him on to Namugongo. The chief of that place was called Sebugulu, and Kikabizi told him to go and cut firewood, and they collected it and made a framework, and put Bengo on it and roasted him. Then they returned singing:—

"We did not destroy Bengo, we hung him up;
We did not destroy him, we hung him up at Namugongo."

And after that, Kikabizi became one of the regular executioners, and always went about with a slow match, and they called him Senkole. After they had killed Bengo, his spirit haunted King Kyabagu and made him ill, and so he asked the medicine men for a medicine that would kill the spirit as well as the body, and the medicine men gave him two kinds, the one to mix with beer and the other to put in a pipe; and he also got from them a charm, and in this charm was a frog, and the name of the frog was the same as that of the charm, Gabogola "the Crier."

When they took prisoners there to be slaughtered they made them sit down in front of the shrine near the place of execution, and they pleaded against them: "These have abused the king, and therefore he has sent them to Gabogola and Bengo to plead their cause."

If the frog did not come out of the shrine they took the prisoners back, saying, "These are too few, Gabogola refuses them, let them bring more," and they went and caught three or four hundred more, and brought them and made them sit down in rows, and Sebugulu, the chief of the place, pleaded as before, and Gabogola, the frog, came out of the shrine; and as soon as it was seen, they said, "He is pleased with them,"

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* Kyabagu was a former King of Uganda, the sixth back from the present King Chwa, thus:—

Kyabagu
- Junju
- Semakokiro
  - Kamanya
    - Suna
      - Mutesa (visited by Speke and Stanley)
        - Mwanga (now exiled to Seychelles).
          - Daudi Chwa (the present King).

† Kago, one of the twenty territorial chiefs, ruler of the country of Kyadondo.

and they brought out a pot with three mouths (*see* Fig. 1), containing beer mixed with medicine, to kill the spirit and the body, and they caused every prisoner to drink of this. The princes drank from the middle mouth and the chiefs from one of the side mouths, and the common people from the other one; and after they had drunk they made them smoke tobacco mixed with medicine, and every prisoner had to smoke a little. The name of the pipe was Kikutaude ("What brought you here"), but if any prisoner refused the beer or tobacco, Sebugulu, the chief of the place, killed him.

FIG. 1.—POT USED IN SLAUGHTER-RITE AT NAMUGONGO.

After this, Sebugulu used to bring a great spear out of the shrine and went and counted the prisoners, striking them on the head with the spear, "one," "two," "three," "four," until he had counted all; and after he had counted them they took them to the place of execution, which was quite near, and made there a framework, and cut them into pieces and threw them on to the framework, and made a great fire underneath; others they did up in bundles of fire-wood and threw them on to the fire, so that they became ashes; but they did not kill them all off, but left one, who, after seeing all his companions killed, was let off, and he was called Kawonawo, "the man who escaped."

But the Christians who were killed at Namugongo at the time of the Munyonyo persecutions* were not forced to smoke Kikutaude, because the chief of the place and the shrine were not there and there was no prince with them, because if there was no prince among the prisoners they used to kill them at another place to the side, because there was no prince, and the spirit of the place was Prince Bengo, and this was an honourable slaughter-place, the slaughter-place of princes.

There used to be many slaughter-places in Uganda, the method of death in each place being different:—*Namugongo*, sliced up into pieces and burned; *Nkumba*, dismembered and the members thrown about, or if many they clubbed them; *Damba I.*, fastened to stakes to be eaten by crocodiles; *Mutukula*, drowned in the lake, after being tied hands and feet.

The pot and pipe were given to me, together with the history which I have translated, by Tefiro Kisosonkole, in whose territory Namugongo is situated. He heard that the things were still there and so had them fetched; the spear had been destroyed previously. The pot and pipe are now in the British Museum. ERNEST MILLAR.

* These executions took place in 1885, when Mwanga attempted to stamp out Christianity.

New Zealand. Edge-Partington.

Ancient Maori Houses: their Use and Abuse. *By J. Edge-Partington.* 99

In the New Zealand section of the Colonial and Indian Exhibition of 1884 were exhibited a Maori carved house and "the tomb, or temporary resting-place, of the great Arawa Chief, Waata Taranui," both marvellous specimens of native workmanship. The tomb was the property of Sir Walter Buller, and has since been presented by him to the French Government and now forms a prominent feature in the Trocadero Museum. The carved house has disappeared from public view; originally intended for our national collections, it was offered to the Trustees of the British Museum, and by them refused, there being no space under cover where it could be exhibited. It was next heard of as a shed for the electric light engine at the South Kensington Museum. Some years ago this *shed* was taken down, and, as far as I am aware, has not been erected elsewhere.

Mr. Percy Smith, the secretary of the Polynesian Society, writing to me from New Plymouth, says that by far the finest of these carved houses lately stood at Rotorua, in the Hot Lake district; it was known by the name of Rauru, after the inventor of Maori carving. This house has lately been purchased by the German Government for £1,600, and will, no doubt, shortly be added to the national collections in Berlin, as the late owner is on his way there to assist in its erection.

Another carved house is carefully preserved in the Colonial Museum, Wellington, New Zealand. This is used as an exhibition room for the Maori collection. The label which hangs on it fully describes how this has been carried out with a full description of the house itself. It is as follows: "This house was built by the Ngatikaipoha tribe of Tauranga, Poverty Bay (who were always noted throughout New Zealand for the excellence of their carving) as a monument to the memory of Tamata Waaka Tuangere, the elder brother of Raharuhi Rukupo, the present chief of the tribe. The work was begun in October 1842 and finished in the March following; it was designed by Raharuhi Rukupo.

"The following is a list of the carvers employed (*a list of* 18 *names*).

"The figure on the post on the right of the entrance represents Raharuhi Rukupo and the remaining figures are intended to represent the most celebrated ancestors of the tribe (*a list of* 38 *names*)."

FIG. 1.—MAORI CARVINGS FROM HOUSE NOW AT WELLINGTON, N.Z.

At the close of the East Coast campaign in 1866 this house was purchased by the Government, and, having been transferred to Wellington, was erected as part of the Colonial Museum in March 1868. The valuable specimen of native art has been restored

in such a manner that, while it is carefully preserved from decay by an exterior covering of wood and iron, its interior presents as much as possible the original character which its designers intended. The only marked innovation has been the elevation of the carved walls on a plinth two feet above the original level, so that the eye of the visitor, when standing up, may be at the same elevation as if he were sitting on the floor of the house in its original state, according to the usual native custom. For the purpose of lighting the interior the reeding which originally filled the spaces between the pillars at one end of the house has been removed and replaced by stained glass.* The total interior length of this house is 43 ft. 8 ins. and the width 18 ft.; the original height of the walls was 4 ft. 8 ins. and the apex of the roof 12 ft. above the floor, but now 7 ft. and 14 ft. 6 ins. respectively.

The side walls contain 32 figures elaborately carved in solid Totara wood, 4 ft. 6 ins. high, 2 ft. wide, and 6 ins. in thickness. The end walls, of 20 pieces of carving, are of a different character and size according to their position, the central carvings, 12 ft. in height, supporting the ridge pole at each end, being the most elaborate in the building. The ridge pole is a huge triangular beam of wood in two pieces, with one end projecting six feet beyond the building and over what originally formed the porch. Besides the supports at each end there were originally two posts supporting this beam in the interior of the house, and from each side panel a plank, with a carving at the lower end, reaches to the ridge. The interspaces were originally filled in with the Kakaho or toe-toe grass, and this has been supplied by an imitation in wood of the fluted surface as being more durable and cheaper of construction than the original material. The position and form of the original window and door have been preserved, and the entrance to the building from the museum has been effected by swinging one of the panels in the side on hinges.

In this house occurs a peculiar form of figure which has not, I believe, been published elsewhere. When going over the house with Sir James Hector in 1897 he drew particular attention to this. I have figured two of these from a photograph kindly taken expressly for me by Mr. Percy Smith. It will be noticed that these ancestors are depicted as passing their hand through the back of their heads and out of their mouths. This is a feat which no ordinary man could accomplish, and it was Sir James Hector's opinion that consequently these particular ancestors were *tohungas* or priests, and that the carvers had adopted this plan of distinguishing them from the rest.

J. EDGE-PARTINGTON.

Religion. **Lang.**

Bugbear Gods. *By Andrew Lang, M.A.* **100**

In Mr. N. W. Thomas's review of my *Magic and Religion* (1901) in MAN, 1902. 90, he says that I have "dragged in Baiame and other 'high gods' of Australia to enforce my point." My point, or one of my points, was that Baiame and Co., and the evidence as to them, could not be *ignored* in a discussion about Australian religion. That is why I "dragged them in," just as I would "drag in" the Deity if a writer on Catholic religion ignored Him. Moreover, I shall continue to "drag in" such evidence as to "high gods," or anything else, as writers whom I am criticising may be ignorant of, or, knowing, may ignore.

Next, as far as Messrs. Spencer and Gillen tell us, Twanyirika, the "great spirit" (so styled by them) of the Arunta, is regarded by the adult males of the tribe as a bugbear to frighten the women and children—a thing on a level with our old friend Mumbo Jumbo. The women are told that the sound of the bull-roarer is his voice, and

* This is of a dull yellow colour, so as, as nearly as possible, to give to the interior its original appearance.—J. E.-P.

that he carries off the young initiates. We are told no more about Twanyirika. Mr. Thomas suggests that, as to my other Australian superior beings (Baiame and the rest), "it is at most a mere hypothesis that they were in the beginning any more than bugbears," and he observes that I—in *Magic and Religion*—"do not even consider the possibility that the high gods are, or were, mere bugbears." Now, elsewhere, and earlier, I *did* "consider the possibility" (*Fortnightly Review*, June, 1899, pp. 1017, 1018).

As I do not believe, any more than Dr. Durkheim does, that the Arunta are "primitive," or represent "man in the chrysalis stage," and as they have a special and very neat metaphysic, which leaves no room for a maker, like Baiame and Co., I rejected in my own mind the notion that Twanyirika is the pristine form of Baiame, and in *Magic and Religion* I did not discuss the question. I regret the omission, and bow to the rebuke of Mr. Thomas. But how does this invalidate my argument, that believers in Baiame have in their creed an unselfish element? They *have*, if we believe Mr. Howitt, Mr. Ridley, Mrs. Langlon Parker, and others. I do not in the least hold that Baiame was originally a bugbear, and that Twanyirika represents the pristine form of Baiame. But it is a theory worth discussing, when we know more about Twanyirika. As to my theory of totems, Mr. Thomas, I hope, will presently have an opportunity of criticising it, as set forth in a new work. A. LANG.

REVIEWS.

Psychology. **Hobhouse.**

Mind in Evolution. By L. T. Hobhouse. London: Macmillan & Co., 1901. 23 × 15, pp. vii–406. 10*s*. net. **101**

Mr. Hobhouse has already—in his *Theory of Knowledge*—thrown much light on what may be called the "inner" side of mind; in the present work he takes it up from the other standpoint, its "outer" side, what it does in the world, how it shows its presence, how it grows in the individual, the species, the race, and what is the perfection or end towards which it is tending. The work is a valuable contribution to comparative psychology, giving us in the place of the scattered pamphlets and detached writings on mind in this or that species of animal, or in animals as a whole, in this or that race of savages, or in the uncivilised world as a whole, a consistent view of the evolution of mental life from its first conditions (pre- or sub-conscious), in reflex action, to its highest expression in the philosopher's ideal of human progress. The detailed working out of this plan could not well be brought within the limits of a single volume. What is done in the present one is to sketch the main lines of the evolution, and to fill in the picture so far as lower animal "intelligence" is concerned, and the transition from that to human thought. Order, system, harmony, these are invariably the products of mind, and by them its presence is known. It brings things together "so that they have a bearing "upon one another," organises action, adjusts it to certain ends, on the basis of relations which in past experience it has discovered or established. So, the growth or evolution of mind proceeds always towards greater comprehensiveness in the relations observed, fuller consciousness of the ends pursued, greater concentration of forces, and, therefore, increased definiteness in the actions by which the ends are attained.

The earlier chapters treat in an interesting way of the *conditions* of mind—"Organic "adaptability," "Reflex-action," and "Instinct." Mr. Hobhouse refuses to regard the behaviour of organisms as purely mechanical; they differ from all possible automata by their self-maintenance; so the reflex-action, the congenital response of a part of the organism to a definite stimulus, is not independent of the state of the organism as a whole; and "Instinct" is a term applied to various forms of behaviour, from the compound reflex to more plastic modes of adjusted action, in which pure instinct is

"suffused with intelligence." In instinct there is always "a persistent internal disposition" which persists throughout the whole reaction, and accordingly gives an opening for individual modifications of what is in the first instance definite, fixed, almost rigidly mechanical. Intelligent behaviour thus arises out of instinctive, with which it is continuous in actual evolution,—intelligence acts from within instinct, gives it plasticity, the ends of intelligence (even in the human race) are posited for it by instinct, yet the two in their "idea" are absolutely distinct.

In chapters 5–10 the appearance and gradual development of true animal intelligence are described, and widely illustrated by examples from natural history as well as by a series of interesting experiments on cats, dogs, elephants, monkeys, &c. carried out by Mr. Hobhouse himself. At the lowest stage instinct begins to be "defined" by experience, the marks of the corresponding object, special food, mate, and the like, that call it forth are more clearly grasped; its conditions, things that are connected usually with it, are "assimilated" to itself. We have not yet separate, distinct ideas, memory-images of the past, for example, but the scene presented to the animal's senses affects it pleasantly or painfully through the subconscious influence of past experience. It is the first step in "correlation," the evolution of mind beyond instinct, and is found in practically all classes of animals—insects, molluscs, fish, &c. Next follows the stage of "concrete experience" at which for the first time purposive, intentional action really occurs; animals which learn to do novel actions through a perceived connection between an event and its consequence, as that the pulling of a certain rope brings food within reach—which do not merely learn by being put through the action required (habituation) —cannot be said to act blindly, they guide themselves by a remembered series of relations a "correlation of relations," an inference. As contrasted with lower animals the monkey makes use of ideas which are both more "elaborate" and more "articulate"; it has greater choice of means, greater freedom of action, is less the slave of instinct or habit. Below man, there is no evidence of the use of language for the communication of knowledge rather than feeling, but the universal judgments and abstract ideas which language at once presupposes and helps to create, are only extensions of the particular judgments and more concrete images of the animal mind. There is no breach of continuity.

The later chapters contain admittedly a sketch merely of the further development. The immense differences in mental power between the man and the monkey, the philosopher and the savage, are differences in comprehensiveness of aim, in degree of organisation of action towards that aim; but "as the scope and clearness of mind increase, certain "points are successively reached at which quite new achievements become possible," with far-reaching consequences which raise a successful species or race into a higher, world than one that only just falls short of the point. Mr. Hobhouse ventures even from the course of the development to form a notion of its consummation, viz., the acceptance of the humanitarian principle, that the perfect and free growth of humanity as a whole become "the end and aim of all human effort," and that the prevailing notions of right and wrong be judged, accepted, and rejected thereby. "The goal of "the movement, as far as we can foresee at present, is the mastery by the human mind "of the conditions, internal as well as external, of its life and growth." This is the only true upward ("orthogenic") development; in method and in results it is opposed to biological evolution, by way of natural selection, which may result in the survival of degenerate types.

One looks forward with interest to the promised completion of the work by a further volume on the human mind in evolution. J. L. McINTYRE.

East Africa. **Gregory.**

The Foundation of British East Africa. By Professor J. W. Gregory, D.Sc. London: Horace Marshall & Son, 1901. 21 × 14, pp. 84, 267. **102**

The English people as a nation have good reason to feel interest in the great commercial companies which have done so much in the past to extend England's sphere of influence in distant parts of the world. The Indian Empire is a monument to the spirit of enterprise which spurred on the founders of the old East India Company, while the results of the foundation of the Chartered Company in Rhodesia are fresh in everyone's memory. In East Africa, however, this policy has proved a failure, and the history of the British East Africa Company, short as it is, is a chronicle of failure and disaster, though none the less interesting and instructive.

In *The Foundation of British East Africa* Professor Gregory has principally occupied himself with the history of the British East Africa Company, and their successor, the Foreign Office, but the earlier history of the country is not neglected. As Professor Gregory points out the history of British East Africa is threefold—geographical, political, and administrative—the result being that the material with which the author has had to deal is of an extremely complicated character. He is to be congratulated on the manner in which he has succeeded in combining the diverse elements into one coherent whole. Naturally, with so limited a space at his command, the author has had to sacrifice much in the way of detail, but the result has been a net gain in clearness, and this is of the greatest importance in a book which in its scope is popular, as is the case with the present work.

It might be said, however, that this tendency, admirable as it is, has been carried too far in dealing with the geography and ethnography of the country. Professor Gregory only touches upon these subjects in so far as, in his opinion they have had any influence on the history of the country, but his account of the natives would have gained in clearness and value had he shown how far the physical formation of the country was responsible for the differences in character exhibited by the various races inhabiting this territory. The differences which exist between the Masai, the Nandi, and the Kavirondo, for instance, are largely due to the influence of climate and cannot be attributed to racial peculiarities alone. This would surely have fallen well within the scope of this work. With archæological and ethnological problems as such, Professor Gregory does not profess to deal. They are stated, and the conclusions at which Hobley and other investigators have arrived are given but without criticism or discussion.

Starting from the earliest time with the Akka dwarfs in Egyptian sculpture, the author gives a rapid review of the references in the Bible, Herodotus, the Periplus, &c., which may be taken to refer to this district. The geographical history of the country then follows, terminating with the explorations of Teleki in 1887–8. The last and most important section of the book deals with the rule of the British East African Company, describes "How Lugard saved Uganda," and closes with an account of the administration under the Foreign Office up to the date of Sir Harry Johnston's appointment as Commissioner in 1899.

Dr. Gregory concludes with a chapter on "The Future of East Africa," the most important part of which consists of an analysis and summary of the material of which the book is composed. It is a recommendation rather than an adverse criticism to say that this chapter is hardly necessary. The facts of the case are placed before the reader with such clearness and impartiality that he who runs may read the lesson taught by the history of East Africa. Up to the end of the period with which Professor Gregory deals the administration of East Africa was of an experimental character. The British East Africa Company was not a company in the ordinary sense of the term, but an organization which had its origin in a philanthropic ideal. The result would, perhaps,

lead one to prefer the methods of a company whose primary aim was business pure and simple. And in the case of the Foreign Office the same remark applies, although in a lesser degree, for under its rule a more definite policy has been formulated and better means taken to carry it out; but it is no exaggeration to say that the rule of the Foreign Office is experimental to this extent, that in so far as our policy in dealing with the natives of East Africa succeeds or fails, so must our policy in dealing with subject races, in general stand or fall.

The disasters which occurred during the reign of the Company and in the early part of the Foreign Office rule may all be traced to one fundamental cause. This was the ignorance displayed by officials and others of the native character. There were exceptions, but they were rare. The Company was hampered, too, by the ill-directed zeal of the rival missions in Uganda who in the "race for converts" intrigued in political matters to attain their end, and that, too, without acquiring anything like an adequate understanding of the native character and modes of thought. Of early missionaries such as Krapf one can hardly speak too highly, but it was the intolerance of his successors that gave rise to the factions which have proved so great a check to the progress of the country.

The same cause, although in a lesser degree, is to be seen at work under the rule of the Foreign Office. An attempt was certainly made to grapple with the problem, and the officials were no longer men unacquainted with the handling of subject races, but Indian officers, with whom as a class the idea of caste is so deeply engrained, were hardly fitted for handling a race of natives such as these, who were coming into contact with the ideas and forces of civilisation for the first time. This was shown even in the rebellion of the Soudanese, who were disciplined troops. The ill-advised attempt to suppress the mild form of slavery which existed on the coast in the early days of the Company is another case in point where a little patience and understanding would have averted a grave crisis.

A more hopeful note was struck with the appointment of Sir Harry Johnston as Commissioner, primarily as an African expert; the lessons of the Indian Mutiny had not been entirely forgotten. If native races are to be handled with any degree of success by Europeans, it is essential that they should be men who understand the responsibilities of their position, and either possess a keen insight into the native modes of thought, or be prepared to acquire a thorough knowledge of the habits and customs of the people over whom they have to rule. It is in this way alone that we can hope to introduce civilised ideas to the advantage of the native population, or produce anything more than the veneer which destroys the virtues of the savage without cultivating those of the civilised man. This is especially the case in Uganda, where we have a large and vigorous population which, until a few years ago, had never come into contact with civilisation, and uncontaminated by the vices which it introduces, under an intelligent administration, might be preserved rather than destroyed. E. N. FALLAIZE.

England: Stonehenge and Avebury. **Harrison.**

The Wiltshire Archæological and Natural History Magazine: Stonehenge Bibliography Number, December 1901. Devizes: C. N. Woodward. 8vo. 170 pp. Plates, 4 pp. Price 5*s.* 6*d.* (A Bibliography of the Great Stone Monuments of Wiltshire, with other references. By W. Jerome Harrison, F.G.S.) **103**

The valuable publications of the Wiltshire Archæological and Natural History Society respecting the world-renowned monuments of that county have now been increased by the addition of a very exhaustive bibliography by Mr. Jerome Harrison, who has spared no effort to make it complete. The descriptive list, in alphabetical

order of authors' names, includes references not only to separate books and papers printed in archæological journals, but to newspaper correspondence and caricatures, and to such things as the full-size model set up at Woodhouse Park, Shepherd's Bush, about 1894, and destroyed two or three years later to make way for the generating station of the "tube" (fortunately, perhaps, since it was in contemplation to remove all but the outer ring and erect a bandstand in the middle of it). The drawing in William Smith's MS. description of England of 1588 is mentioned, but the author is certainly mistaken in saying that it shows five of the great trilithons as then erect and complete. The list also contains many references to papers, &c. on other circles, and even on matters only remotely bearing on the subject, which are nevertheless all useful in their way. The account by Mr. A. E. Pass of his explorations at Silbury Hill in 1886 has, however, escaped Mr. Harrison's notice, which is the more remarkable since it was printed in *The Wiltshire Archæological and Natural History Magazine* itself (Vol. XXIII., p. 245). The alphabetical list is brought quite up to date (4th January 1902), and is followed by brief but useful summaries and classifications. It will be much valued by all interested in rude stone monuments. A. L. L.

East Africa: Linguistics. **Madan.**

English-Swahili Dictionary. By A. C. Madan. 2nd ed. Oxford: Clarendon Press, 1902. 7 × 4½. pp. xv–462. 7*s.* 6*d.* net. **104**

The second edition of Mr. A. C. Madan's *English-Swahili Dictionary* (Clarendon Press) will be welcomed by all students. It has been enlarged from 415 to 462 pages, and thoroughly revised. At first sight it might seem unnecessary to include words like "potentially," "loquacious," "fatigue," which have either to be paraphrased or reduced to simpler synonyms before they can be rendered in Swahili; but their presence is at once explained when we find that one of the author's objects is to enable native students at Zanzibar to understand English books. A complete *Swahili-English Dictionary*, by-the-bye, seems to be a desideratum. The vocabulary contained in Steere's *Handbook*, though avowedly only provisional in character, is, for practical purposes, quite as useful as Krapf's *Dictionary*. The *Safari za Wasuaheli* contains a good many words to be found in neither, but it is only fair to add that a number of these are Arabic, while others, as *mbogo* (a buffalo), *ngara* (a skin, hide) appear to belong to various inland. languages. A. WERNER.

Art. **Grosse.**

Les Débuts de l'Art. Par E. Grosse. Translated from the German by E. Dirr. Paris: Felix Alcan, 1901. 22 × 15, pp. 139. 6*s.* **105**

This well-known work has been translated into French and now forms a volume of the *Bibliothèque Scientifique Internationale.* As it appeared in German in 1894 and has been translated into English no prolonged notice is called for. A large number of foot-notes, mostly quotations from recent authors, have been added. These have kept the book up to date and have broadened its outlook without taking anything from its value as a collection of facts. This is the view taken in the preface to the French translation written by the late Léon Marillier, who points out that in 1894 it was necessary to collect and arrange a large number of facts before considering the relation of primitive technique to the more highly-finished intentionally-artistic productions of Europeans. Among the latter, differentiation—brought about by fashion and by great teachers—has proceeded too far to allow of the link between given forms of social development and

artistic production being clearly discerned. Above all the personality of the artist bulks too largely, and ethnic differences tend to be obliterated. It is here that Marillier ceases to follow Grosse. The latter, struck by the similarity of psychological processes among tribes in identical stages of economic development in different parts of the world, would consider art mainly dependent on the economic position of its creators and little influenced by race. Marillier, on the contrary, held that artistic differentiation was mainly racial in origin. It is noted that among the factors producing esthetic manifestations Grosse does not lay sufficient stress on magic. Perhaps the same might be said of religion, though, considering the number of profane ornaments and designs which have had a religious significance read into them by literary workers, the omission is almost pardonable.

C. G. SELIGMANN.

India. **Rao.**

Some Questions of South Indian Ethnology. By C. Hayavadana Rao, B.A., Reprinted from the Madras Christian College Magazine. Madras, 1901. **106**

It is satisfactory to find from this collection of papers that there is an educated native public which interests itself in such questions. In his first paper the writer disputes the Negrito origin of the Dravidians: in his second he attempts to fix the "Date and Nature of the Aryan Immigration into South India": in the third he denounces the hypothesis of a Turanian element in the Indian races. He has thus been bold enough to attempt to solve the most thorny question of Indian ethnology. He has read a good deal of the current literature of the subject, and his papers were doubtless interesting to the audience which he addressed. But it is hardly necessary to point out that native students of anthropology in Madras would do well to postpone the discussion of questions such as these and devote themselves to the kind of patient work which Mr. Thurston is carrying on with such success. What we want now, in short, is not discussion of problems such as those treated of in this pamphlet, but enquiries into the physical anthropology, manners and customs, folklore, and popular religion of the South Indian races which educated natives like the writer, with a taste for the study of man, might investigate with advantage.

W. CROOKE.

Africa. **Grogan : Sharpe.**

From the Cape to Cairo. By E. S. Grogan and A. H. Sharpe. New and revised edition. London: Hurst and Blackett, 1902. pp. xix + 412. Price 7*s.* 6*d.* **107**

It is to be regretted that the author of *From the Cape to Cairo* has only touched incidentally upon the customs of the natives with whom he came into contact on his walking tour through Africa, the more so as the information that he has given us on this subject shows that he has the "observant eye." Mr. Grogan includes a chapter on the native question, and although his views are rather crudely expressed, it cannot be gainsaid that at bottom there is much in what he says; but it is unfortunate that he is unable to see that there is a place for a just and impartial view of the question lying midway between the view of the "shrieking sentimentalist" and that view which regards the native as no higher than a beast of burden. As might be expected, from his point of view, the author contrasts the German colonial policy favourably with our own. The picture he draws of the lack of control in the districts under the Congo Free State is appalling and worthy of consideration of all who have the interests of the native population at heart.

E. N. F.

Printed by EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.

Mouthpiece (Side view)

Muzzle (Side view)

Muzzle (End view)

Mouthpiece (End view)

Spatula and darts

Quiver

Collotype by H. KLEINMANN & Co

Malay Blowpipe

ORIGINAL ARTICLES.

Malay Peninsula. With Plate K. Skeat.

Blowpipe from Kuantan (Malay Peninsula). *By W. W. Skeat, M.A.* 108

A rare and interesting form of blowpipe has recently been presented to the British Museum by Mr. F. W. Douglass, of the Malay States Service, who obtained it on the east coast of the Malay Peninsula in the Kuantan (or northern district of Pahang, during October 1897, from a man belonging to one of the jungle tribes dwelling on the borders of Pahang and Kemaman. Its measurements are as follows :—

Total length - - - - - -	5 ft. 2 in.
Interior diameter of tube at mouthpiece - - -	0 „ $0\frac{3}{8}$ „
Interior diameter of tube at muzzle-end - - -	0 „ $0\frac{7}{16}$ „

Hence the bore of the tube at the muzzle-end is *a fraction less* than it is at the mouthpiece, so that we have here an instance of a wooden blowpipe imitating the natural proportions that obtain in the bamboo blowpipe, from which it was copied; for in the bamboo blowpipe it is always the *root-end* which is placed nearest the mouth, so that the bore at the muzzle-end is generally a fraction less than at the mouthpiece; in other words, the bamboo blowpipe has naturally a slight "choke" in the bore.

The illustrations here given (Plate K.) are full-size. They show the muzzle-end and the mouthpiece in two positions, the mouthpiece having been chipped in transit. I had it photographed to show the binding before it was mended.

This particular blowpipe is made of some very hard wood, probably of "pĕnága" (*calophyllum*). The tube consists of the two halves of the cylinder, carefully split down the middle and grooved on the inner side throughout their entire length, so that when fitted together again the two grooves form a perfect tube. This tube, which forms the blowpipe, is bound round from end to end with a long thin strip, probably of some kind of cane (*calamus*), over which is deposited a thick incrustation of a gutta-like substance, the object of which is evidently to protect and prevent the bands from being loosened. The thickness of this deposit is increased to about half-an-inch at the mouthpiece.

In Vaughan-Stevens (ed. Grünwedel)* a very similar blowpipe (collected among the "Benua" of East Johor) is described. It is not absolutely identical with Mr. Douglass's specimen, since it is much longer (about 9·0 inches), and its two half cylinders of "pĕnága" wood are protected by a bamboo casing. Mr. Douglass's specimen, on the other hand, corresponds with remarkable fidelity to a Peruvian type of blowpipe, such as is described in the second volume of "Reiss und Stuebel's" *Kultur und Industrie Sudamerikanischer Völker.* This Peruvian specimen came from the Huallaya river, and was described as consisting of "the two halves of a palm-stem carefully "grooved and fitted together and bound round with çipo, which is covered besides with "a layer of black wax. It is fitted with a short bone mouthpiece."†

Since the above was written Mr. Douglass has very kindly forwarded to me (also for presentation to the Museum) the quiver which belongs to the blowpipe I have just described, and this, too, like the blowpipe, presents several new and interesting features.

The body of the quiver is made from a bamboo internode measuring $11\frac{1}{2}$ inches in length, and of great diameter (four inches). It is covered with a flattish four-peaked cap made of woven pandanus-leaf, which is made fast to a double ring of plaited rattan or *calamus* (which encircles the body of the quiver) by means of a short cord of plaited tree-bark (*artocarpus ?* or *eugeissona tristis ?*). The usual waist-cord of twisted

* *Veröffentlichungen a. d. königl. Mus. f. Völkerkunde.* II. Band, 3/4 Heft. Pp. 102 (Berlin, 1892).

† Cp. Otis T. Mason, *Origin of Invention*, p. 208.

tree-bark is attached to the same rattan-rings. The exterior of the quiver is decorated throughout by the usual incised patterns, which are, however, roughly and irregularly executed, and there are traces of rosin at the bottom of the quiver.

The interior is fitted with the usual rolled-up reed-bundle, the number of reeds being sixty-five. Of these, however, only five contain darts, and there is one loose dart of which the butt-end has been lost, making six darts in all. All of these darts have broken or (as I think more probable) blunt points and have very probably been used for knocking over small birds. Only one (the loose one) has traces of a coating of poison upon it, and even of this one the extreme tip of the point is blunt like the rest.

The butt-ends of the darts, one of which (the longer ones) measure 7½ in. in length, and others (the shorter) about 7⅛ in., are made of some very light pith-like wood and are of irregular length, two having long butt-ends (about 1 in.), the other three being only half that length. But they are all very incompletely rounded, are all cut off square at the lower end, and are all of pretty much the same diameter throughout, instead of tapering towards the shaft, as is the case with the better made darts used by the Sakais, Besisi, &c. Another point is that in two of them the upper end of the dart-shaft projects beyond the upper end of the butt, a peculiarity which may be seen in the blowpipe darts of Borneo.

The only other contents of the quiver were two rolled up pieces of old chintz cloth, and a spearhead-shaped spatula, still coated with poison.

In view of all the evidence, and in spite of slight differences, I think there need be no hesitation whatever in identifying both the blowpipe and quiver as a variety of the "Benua" blowpipe and quiver which Vaughan Stevens obtained in the eastern part of Johor, in spite of the fact that this specimen was obtained in Kuantan, north of the Pahang, a fact which disagrees with a statement made by Vaughan Stevens elsewhere, viz., that this type of blowpipe is not found (in the Peninsula) north of the river in question. This particular specimen, at all events, has the additional interest of more nearly approaching (it is, in fact, practically identical) the blowpipe of Peru than any other yet recorded from this part of the world—a fact which should be of special interest in connection with problems of distribution. W. W. SKEAT.

Torres Straits: String Figures. Rivers: Haddon.

A Method of Recording String Figures and Tricks. *By W. H. R. Rivers, M.D., and A. C. Haddon, Sc.D., F.R.S.* **109**

Many travellers have stated that various peoples, more or less primitive, amuse themselves by making string figures to which the general term of "cat's cradle" is usually applied. We are informed that these figures are much more complicated than are ours, and that they represent various natural and artificial objects sometimes in a state of rest, sometimes in a state of motion.

Occasionally a list is published of some of the figures made by a particular people, perhaps with illustrations of the completed figure. So far as we are aware, Dr. Franz Boas* was the first to publish a descriptive account of the method employed by a primitive people in making any of these figures; unfortunately he gives descriptions of but two of the five Eskimo figures he represents.

Mr. Harlan I. Smith† published sketches illustrating the various stages in the making of a couple of string figures of the Thompson Indians of British Columbia.

These two records are the only descriptions we have seen of the method of making such figures; the paucity of the available material must be attributed to the considerable

* F. Boas, "The Game of Cat's Cradle," *Internationales Archiv für Ethnographie*, I., 1888, p. 229.

† *Mem. Am. Mus. Nat. Hist.*, Vol. II.; *Anthropology*, I.; *The Jesup North Pacific Expedition*, IV.; "The Thompson Indians of British Columbia," by James Teit, April, 1900, p. 282.

difficulty usually experienced in learning and recording these figures. In order to minimise this difficulty we have devised a system of nomenclature and description which renders it possible to describe any operation in comparatively few words.

We have found that certain sentences are spoken or muttered either during the manipulation of a figure or trick, or on its completion. These will be printed, together with all the string figures and tricks that we collected in Torres Straits, in Vol. IV. of the *Reports of the Cambridge Anthropological Expedition to Torres Straits.*

The existing data are too slight to indicate how far these string figures are of value in ethnological study. Indeed, until some progress has been made in any branch of study it is impossible to gauge its importance.

Indications are not lacking, however, that some at least of these string figures have, or have had, a definite significance or utility amongst several peoples; but at present it is not our intention to enter into a discussion of the subject. Our object is to try to induce field workers to pay attention to the subject and to record the method of making the figures, and to assist them in this we offer the following nomenclature and method of description. We have little doubt that those who interest themselves in these simple amusements will find that their labour has not been in vain.

We employ the term "string figures" in those cases in which it is intended to represent certain objects or operations. The "cat's cradle" of our childhood belongs to this category. "Tricks" are generally knots or complicated arrangements of the string which run out freely when pulled. Sometimes it is difficult to decide which name should be applied.

A piece of smooth, pliable string should be selected which is not liable to kink. A length of about 6 ft. 6 in. (2 mètres) is usually the most suitable; the ends should be tied in a reef knot, and the ends trimmed. A spliced, knotless string would be best of all.

Terminology.—A string passed over a digit is termed a loop. A loop consists of two strings. Anatomically, anything on the thumb aspect of the hand is termed "radial," and anything on the little-finger side is called "ulnar," thus every loop is composed of a radial string and an ulnar string. By employing the terms thumb, index, middle-finger, ring-finger, little-finger, and right and left, it is possible to designate any one of the twenty strings that may extend between the two hands.

A string lying across the front of the hand is a palmar string, and one lying across the back of the hand is a dorsal string.

Sometimes there are two loops on a digit, one of which is nearer the finger-tip than the other. Anatomically, that which is nearer to the point of attachment is "proximal," that which is nearer the free end is "distal." Thus, of two loops on a digit, the one which is nearer the hand is the proximal loop, that which is nearer the tip of the digit is the distal loop; similarly we can speak of a proximal string and a distal string.

In all cases various parts of the string figures are transferred from one digit or set of digits to another or others. This is done by inserting a digit (or digits) into certain loops of the figure and then restoring the digit (or digits) back to the original position, so that they bring with it (or them) one string or both strings of the loop. This operation will be described as follows:—"Pass the digit into such and such a loop, take up such and such a string, and return." In rare cases a string is taken up between thumb and index. A digit may be inserted into a loop from the proximal or distal side, and in passing to a given loop the digit may pass to the distal or proximal side of other loops. We use these expressions as a general rule instead of "over and under," "above and below," because the applicability of the latter terms depends on the way in which the figures are held. If the figures are held horizontally, "over and above" will correspond as a general rule to the distal side, while "under and below" will correspond to the proximal side. In some cases when there is no possibility of confusion, we have used the shorter terminology.

A given string may be taken up by a digit so that it lies on the front or palmar aspect of the finger, or so that it lies on the back or dorsal aspect. In nearly all cases it will be found that when a string is taken up by inserting the digit into the distal side of a loop, the string will have been taken up by the palmar aspect, and that the insertion into the proximal side of the loop involves taking up the string by the dorsal aspect of the digit.

Other operations involved are those of transferring strings from one digit to another and dropping the strings from a given digit or digits.

The manipulation consists of a series of movements, after each of which the figure should be extended by drawing the hands apart and separating the digits. In some cases in which this would interfere with the formation of the figure, a special instruction will be given that the figure is not to be extended. Usually it is advisable to keep the loops as near the tips of the digits as possible.

There are certain opening positions and movements which are common to many figures. To save trouble these may receive conventional names; the use of these will soon be apparent, but it is better to repeat descriptions than to run any risk of obscurity.

Position I.—This name may be applied to the position in which the string is placed on the hands when beginning the great majority of the figures.

Place the string over the thumbs and little fingers of both hands so that on each hand the string passes from the ulnar side of the hand round the back of the little finger, then between the little and ring fingers and across the palm; then between the index and thumb and round the back of the thumb to the radial side of the hand. When the hands are drawn apart the result is a single radial thumb string and a single ulnar little finger string on each hand with a string lying across the palm.

This position differs from the opening position of the English cat's cradle in which the string is wound round the hand so that one string lies across the palm and two across the back of the hand with a single radial index string and a single ulnar little finger string.

Opening A.—This name may be applied to the manipulation which forms the most frequent starting point of the various figures. Place string on hands in Position I. With the back of the index of the right hand take up from proximal side (or from below) the left palmar string and return. There will now be a loop on the right index, formed by strings passing from the radial side of the little finger and the ulnar side of the thumb of the left hand, *i.e.*, the radial little finger strings and the ulnar thumb strings respectively.

With the back of the index of left hand take up from proximal side (or from below) the right palmar string and return, keeping the index with the right index loop all the time so that the strings now joining the loop on the left index lie within the right index loop.

The figure now consists of six loops on the thumb, index, and little finger of the two hands. The radial little finger string of each hand crosses in the centre of the figure to form the ulnar index strings of the other hand, and similarly the ulnar thumb string of one hand crosses and becomes the radial index string of the other hand.

The places where the strings cross in the centre of the figure may be termed the crosses of Opening A.

All the string figures that follow are made by Melanesians. We obtained Nos. 1, 2, 5, 6, 7, 9–12 from Mer (Murray Island), and Nos. 2, 5, 7, 11 also at Mabuiag in Torres Straits. No. 8 was obtained in Kiwai, at the mouth of the Fly River, British New Guinea. Nos. 3 and 4 were taught to us by a native of Lifu, Loyalty Islands, south-west Pacific, who happened to be residing in Mabuiag. There is no doubt that they are true Lifu figures. *Kamut* is the name for these string figures in the Murray Island language.

1. *Baur*, "fish-spear" (Mer).—Position I.—Take up with the right index the transverse string on the left palm from its proximal side, give it one twist and return. Pass the left index through the right index loop from the distal side and take up the transverse palmar string of the right hand from the proximal side and return through the loop. Drop the thumb and little finger loops of the right hand and pull the hands apart. (Fig. 1.)

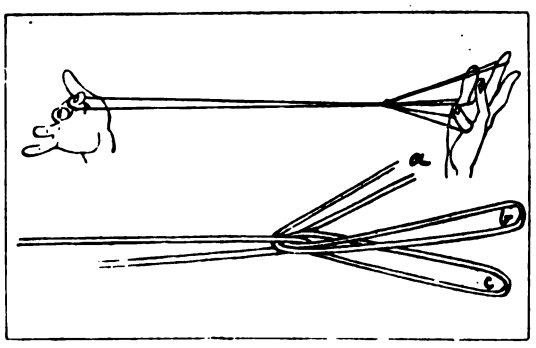

FIG. 1.—BAUR, "fish spear."
a. Thumb. *b*. Middle finger. *c*. Little finger.

2. *Ti meta*, "the nest of the *Ti* bird" (Mer); *Gul*, "a canoe" (Mabuiag). — Opening A. — Insert each index into the little finger loop from the distal side and pass it on proximal side of radial little finger string and bring it back to its previous position by passing it between the ulnar thumb string and the radial index string. Let go little fingers. There are now two loops on each index and a large loop passing round both thumbs. Insert the little fingers from the distal side into the index loops and pull down the two ulnar index strings. Let go both thumbs gently and insert them into the same loop in the opposite direction to which they had been previously (*i.e.*, change the direction of the thumbs in their loop). With the dorsal aspect of the thumbs take up from the palmar side the strings passing obliquely from the radial side of the index fingers to the ulnar little finger strings and extend the figure. The inverted pyramid in the centre represents the bird's nest. (Fig. 2.)

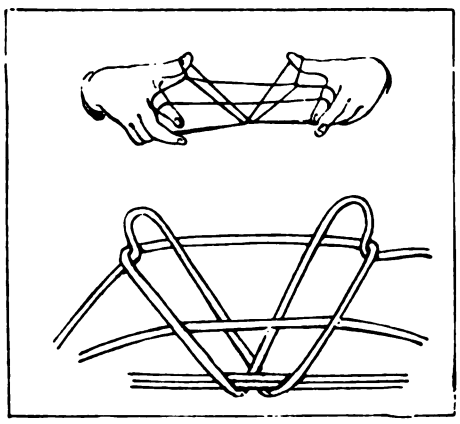

FIG. 2.—TI META: a somewhat conical bird's nest.

3. *Tim*, "a well" (Lifu).—This figure is precisely the same as *Ti meta*, but in this case the inverted pyramid represents a well. By slightly twisting the right wrist to the right and the left wrist to the left the apex of the pyramid is brought to a level with its base. The original condition is spoken of as the well being full of water, in the latter the well is said to be dry.

4. *Sihnag*, "the fence round the well" (Lifu).—*Tim*.* With the dorsal aspect of the thumbs take up the two radial index strings and bring them through the thumb loops. Drop the little fingers and pull tight. Release the index fingers gently. Insert the little fingers into the thumb loops and extend the figure. (Fig. 3.)

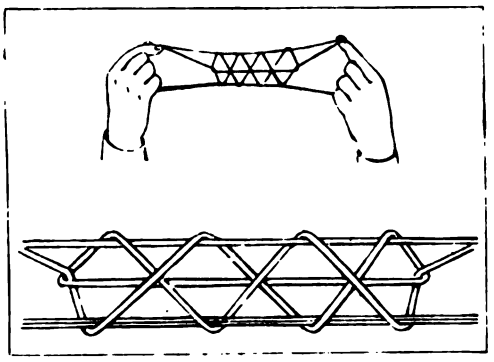

FIG. 3.—SIHNAG, "a fence."

* This means that the *Tim* figure is to be made first, the new figure being a continuation of it.

5. *Lem baraigida*, "setting sun." (Mer); *Dògai*, "a star" (Mabuiag).*—Opening A. —Pass little fingers over the index loops and insert into the thumb loops from the distal side and take up with the back of the little fingers the radial thumb string. Release the thumbs. The index fingers have each one loop and the little fingers two loops. Passing the thumbs under the index loops, take up the two radial strings of the little fingers from the proximal side and return, passing under the index loops. Release little fingers. By this movement the little finger loops have been transferred to the thumbs. Pass little fingers distal to the index loops, and take up from the proximal side the two ulnar strings of thumb loops. (End of "*Lem* opening.")

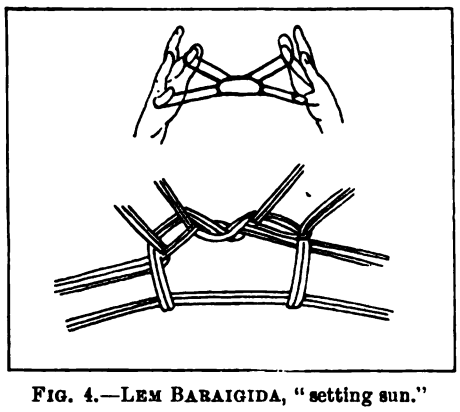

FIG. 4.—LEM BARAIGIDA, "setting sun."

Transfer loop of left index to right index and loop of right index over the left index loop to left index. Pass right middle finger† from the distal side through index loop and take up from the proximal side the two ulnar strings of the thumb loop and return through the index loop. Do the same with the left hand. Release thumbs and index fingers. Pass the thumbs from the proximal side into the middle finger loops and withdraw middle fingers, thus transferring middle finger loops to thumbs. Extend the figure with thumbs towards the body. (There will then be a St. Andrew's cross in centre of figure. Insert index fingers from the distal side into the lateral spaces of the cross, and into the central inverted triangle from the proximal side and take up the arms of the cross and return).‡ Pass right middle fingers through the index loop from the distal side and take up from the proximal side the two ulnar thumb strings and return through the index loop. Release the thumbs and index fingers, and with the thumbs manipulate the figure so as to make an approximate semicircle with four diverging loops (rays). Drop middle fingers and draw out and the sun will set. (Fig. 4.)

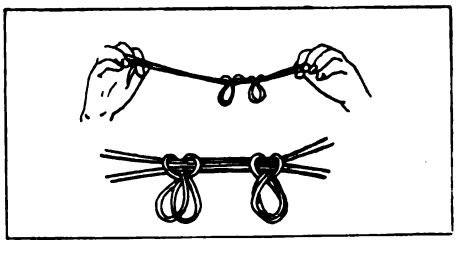

FIG. 5.—ARES (*a*), "fighting."

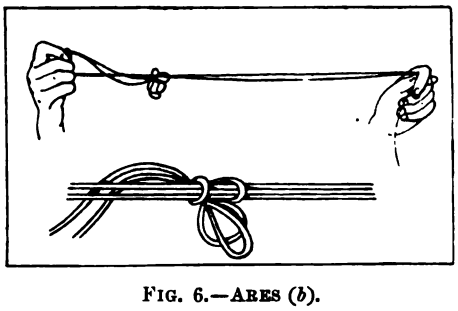

FIG. 6.—ARES (*b*).

6. *Ares*, "Murray and Dauar men fighting" (Mer).—*Lem* opening.—Insert the index fingers into the central triangle from the proximal side and take up the radial thumb strings. Loop the proximal index string of each hand over the two distal strings and over the tip of the index

* This figure requires a specially long string.

† This operation may be done simultaneously with both middle fingers, but it is somewhat difficult and it is rather more easy to manipulate each middle finger separately.

‡ An alternative description is as follows: There is now a triangle in the middle of the figure, the apex of which is towards the body and its base is formed by the ulnar little finger strings. On either side of the triangle is a space. Insert the index fingers into these spaces from the distal side, keeping to the ulnar side of the short strings which cross the figure transversely, and with the backs of the index fingers take up the strings forming the sides of the triangle.

on to its palmar aspect. Let go thumbs. Twist the index fingers three times and drop the index loops. Insert the four fingers into the little finger loops and draw slowly apart. The two index loops will approach each other and become entangled. One represents a Murray man and the other a Dauar man; they "fight, fight, fight," and one loop eventually remains. When done carefully this loop can now be drawn to one hand along the two strings, it represents the Murray man carrying off the Dauar man's head. (Figs. 5 and 6.)

7. *Geigi*, "King fish" (Mer); *Dangal*, "Dugong" (Mabuiag).—Opening A.—Drop right index, loop left index over string from thumb to little finger, drop left thumb and little finger, draw tight, left hand as at beginning with Position I.

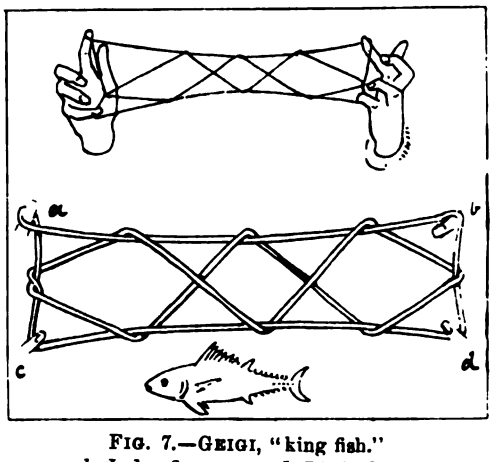

FIG. 7.—GEIGI, "king fish."
a, *b*. Index fingers. *c*, *d*. Little fingers.

Loop left index from above over transverse cord of right hand and draw back, twisting once; loop right index from above over the ulnar thumb string and the radial little finger string and return; loop right little finger over ulnar thumb string of same side, inside the triangle formed by the last movement, and loop the left little finger over the ulnar index string; drop the thumbs and stretch the figure on the index and little fingers of each hand.

Another person puts a hand into central diamond, the manipulator lets go the right hand and pulls with the left hand, and the fish will escape; if he lets go with the left and pulls with the right hand the fish will be caught. (Fig. 7.)

8. *Kokowa*, "crab" (Saguane, Kiwai Island).—*Ti meta.*—Put the little fingers from the proximal side into the thumbs loops. Release thumbs. Put thumbs into little finger loops and take up through that loop the double strings on the palms. Release little fingers. Put little fingers from the proximal side into thumb loops and release thumbs. A straight string passes from one index to the other; take up this string from the proximal side with the thumbs and release indices; put indices into thumb loops in opposite direction and release thumbs. A loop passes from the centre of each palmar string to the outer angle of the centre lozenges; take up with the thumbs from the proximal side the string of this loop that lies nearest to you. Exchange loops on thumbs, the left passing under the right. Pass the middle fingers distal to the index loop and take up the ulnar thumb strings from the proximal side. Release thumbs. Pass the thumbs into the middle finger loop from the distal side and take the ulnar middle finger string from the proximal side. Release middle finger. With the thumbs take up from the proximal side the radial index strings and return through the thumb loops. Release indices. Pass indices from the proximal side into thumb loops and release thumbs. One of the two radial little finger strings of each hand goes across the figure and crosses the corresponding string from the other little finger in the middle within a central triangle. (If not apparent this triangle will become so by a slight manipulation.) Take

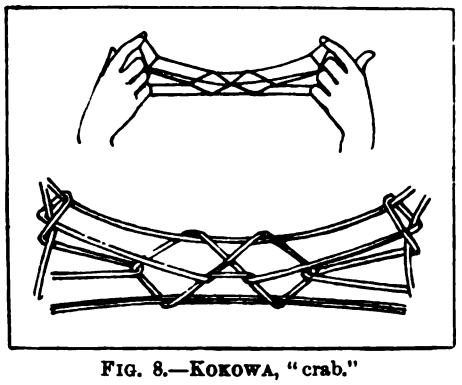

FIG. 8.—KOKOWA, "crab."

up these strings from the proximal side at the point at which they cross in the triangle with both thumbs. With the thumbs from the proximal side take up the radial index strings and return through the thumb loops. Release indices. Extend to form the crab. (Fig 8.)

9. *Pagi*, "a sea-snake" (Mer).—Opening A.—Pass the right hand round the left hand so that all the strings cross the back of the left hand from the radial to the ulnar side. Pass the left hand and its strings from the distal side into the loop of the right index, and bring it out proximal to the ulnar string of the index. Let go the right index. Unwind the left hand. Let go the left index. There is then a single transverse string on the right palm, and a single transverse string on the back of the left hand. With the index finger of the left hand take up from the proximal side the transverse string on the right palm. Transfer the string from the back of the left hand to the palm of the left hand and draw tight. Let go left thumb. Transfer the loop of the left index to the left thumb. Put each index into its little finger loop from the distal side, and take up the ulnar string with the back of the index. Hold the hands pointing away from the body with the index fingers uppermost. Disengage the left thumb. Gently jerk the right index and the snake will swim. (Fig. 9.)

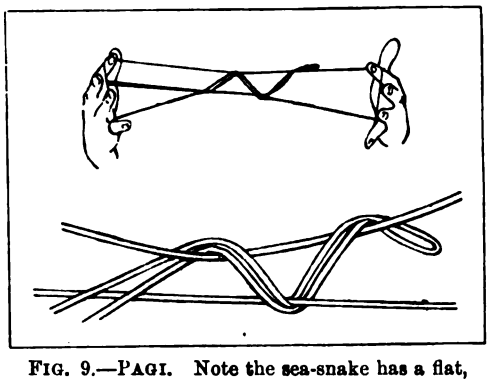

FIG. 9.—PAGI. Note the sea-snake has a flat, not a thin pointed tail.

10. *Tup*, "a small fish" (Mer).—Hold a portion of the string between the thumb and the index of each hand and make a ring and insert the index fingers into this ring so that the crossed strings are away from the body. Separate the hands. Each index finger has now two loops and the strings from the ulnar side cross one another.

End of *Tup* opening.—Pass the thumbs of each hand into the proximal loop from the distal side and take up the ulnar string of that loop with the dorsal aspect; repeat with the distal loop. Pass little finger of each hand over the radial distal string of the index and take up from the proximal side the proximal radial index string. Each little finger is now in a triangle. Pass each index finger from the distal side into the triangle of its own hand, and take up the distal radial index string which forms the side of the triangle nearest to you. Drop thumbs and hold the index and little fingers widely apart. Four fish will then be seen.

Release the distal loop of each index, drop the little fingers, draw the hands apart and the figure resolves itself into four strings.

11. *Monan*, "lizard" (Mer); *Maita*, "intestines of a turtle" (Mabuiag).—Hold the string in the left hand so that a long loop hangs down from it. Pass the right hand through the loop away from the body, sink the hand from the wrist and twist it towards the right, then pass it backwards behind both strings and forward to the left of the left string, then raise the right hand from the wrist and bring it back between the strings and pull the hands apart. The right hand is then released.

12. *Kebe mokeis*, "the mouse" (Mer).—Hold left hand with the thumb uppermost and the fingers directed to the front. Put whole left hand through the string, letting the loop fall down its dorsal and palmar aspect from the radial side of the thumb. There will then be a pendant palmar and dorsal string on the left hand. Pass index of right hand beneath the palmar string, and between the thumb and index of the left hand, then pass it round the pendant dorsal string bringing it between the thumb and index. Give the loop thus made a twist clockwise, and place it over the index of the left hand. Pull

tight the pendant strings. Again pass right index beneath the pendant palmar string and between the index and middle fingers, hook it over the dorsal string as before. Bring it through as before, twist the loop clockwise, and put it over the middle finger. Repeat so as to make similar loops over the ring and little fingers. Pull all the strings tight. Remove the loop from the left thumb, hold it between the left thumb and index. With right hand pull the palmar string, and make a squeaking noise as the loop disappears from the left hand. W. H. R. RIVERS: A. C. HADDON.

Japan. Aston.

Gohei and Inao. *A Note to an Article on the Japanese "Gohei" and the Ainu "Inao," contributed to the "Journal of the Anthropological Institute." XXXI.*, 131 *ff.* *By W. G. Aston, C.M.G.* **110**

Since writing this article my attention has been drawn by Mr. F. V. Dickins to some further evidence as to the character of the *Kedzuri-kake*, collected by a Japanese scholar who signs himself in Sanskrit, Vajra Samadhi Nagarjuna. It appears from the facts adduced by him that the *Kedzuri-kake* were, at least in some cases, phallic emblems, thus confirming a suspicion I had already entertained from their form, their function (in promoting procreation), and the date of the woman-beating ceremony, namely, the full moon of the first month, which is also that of the festival of the phallic *Sahe* or *Sai no Kami*.

Mr. Nagarjuna agrees that the *Kedzuri-kake* and the *Inao* are identical. He knows, however, that the latter have no phallic quality, and wonders how the Ainus came to use them as general offerings to their deities. He refers to a practice in eastern Japan of boys of twelve offering phallic *Kedzuri-kake* to the gods (the *Sai no Kami?*) on the first full moon of the year. But this scarcely explains the Ainu practice. Why, again, should the Ainus call the *Inao* by the Japanese name *nusa*, that is to say, offerings? Nor does the *Kedzuri-kake* ceremony at Gion appear to have any phallic character. The subject requires fuller elucidation. W. G. ASTON.

REVIEW.

Armenia. Lynch.

Armenia: Travels and Studies. By H. F. B. Lynch. 2 vols. 197 illustrations and numerous maps. pp. xxvi.–982. London: Longmans, 1901. **111**

These are the most ambitious travel volumes that have been issued in English for some years. The author took every preliminary measure possible to justify the scale of his publication. After familiarising himself with eastern travel in Mesopotamia, Persia, and Georgia, Mr. Lynch made two journeys, each of many months' duration, up and down Russian and Turkish "Armenia," *i.e.*, the Armenia Major of antiquity. The Armenia Minor of Roman Imperial days, however, he hardly touched, and the Lesser Armenia of the Crusaders and the Roupenian dynasty is outside his range altogether. Mr. Lynch has also worked up local history with a thoroughness from which all travellers might take example, and has gone through not less exhaustively the European literature bearing on the country. We do not gather that he is able to read native writers in the original Armenian, but the collaboration of Mr. F. C. Conybeare has supplemented his deficiency in that respect. Finally, he has been in no undue hurry to publish; his first Armenian journey was made in 1893, and his second was over in September 1898.

The result is this magnificently printed and illustrated mixture of travel notes and impressions, historical and archæological research, political ratiocination, and geographical

information. There is a great deal, in fact, of almost everything for which one would look in a reference book on Armenia, presented in a more comprehensive and detailed form than elsewhere. The notable exception, unfortunately for the readers of MAN, is anthropology. Either Mr. Lynch felt little interest in the more primitive life and custom of the people, or he travelled too much *en prince* to get into touch with the lower strata of society. In his book one hears a great deal of officials of all sorts, of the higher clergy, of beys, and of soldiers, but very little indeed of the common peasant; and from one fruitful field of anthropological inquiry Mr. Lynch took great care to exclude himself by his prejudice against all sorts and conditions of Kurds.

One must, therefore, let anthropology go and review the author as traveller, geographer, archæologist, historian, and politician. But at the outset we cannot refrain from expressing regret that the results of his investigations in all these capacities have been confounded in one book. The example of Lord Curzon has, we fancy, determined his scheme of publication; but, unfortunately, Mr. Lynch to his industry and comprehensive view does not add Lord's Curzon's power of selection and arrangement, clearness and terseness of style, sense of proportion, discrimination in the use of authorities, and impartiality of judgment: and it cannot be said that his laudable ambition to improve on the dryness of the Viceroy's *Persia* by the introduction of elaborately written descriptions of scenes and men has been crowned with great success. As a record of travel the book is somewhat marred by these "purple patches" and by the evident aloofness of the traveller from the life among which he moved.

Geographers, however, owe Mr. Lynch a great debt for his general map of the Armenian plateau (to be bought separately, and the best yet compiled from Russian, British, and German *data*), and for his most admirable photographic reproductions of the scenery. The letterpress adds less from the geographical point of view than might have been expected, and in dealing with geographical features the author shows, an indifference to the usual methods of scientific statement, a tendency to novelties of expression, and a diffuseness which often obscure his meaning. His chapter on the Bingiul Dagh, however, supplies much new information and corrects previous ideas as to the character of this cardinal point in Armenian orography, and his descriptions of the great Van volcanoes, Nimrud and Sipan, may be regarded as final. The simplicity of the plateau geology has never been so well stated, and for that kind of investigation it was as happy a thought to enlist the services of Mr. F. Oswald as it was to secure those of a skilled photographer like Mr. E. Wesson, of the London Polytechnic. To this fortunate collaboration we owe the superb views of Ararat from many points, and Mr. Lynch's description of his ascent supplies an instructive supplement to those previously published, if it lacks some of the vividness and force of Mr. Bryce's famous record of the same achievement.

Mr. Lynch's routes did not take him through districts where an archæologist has very much to do. Had he lingered longer in the Lesser Caucasus or included the Dersim in his investigations he might have had much more to record; but in such antiquities as he did see—mainly in the province of Armenian art—his interest is great and his competence very considerable. We should certainly turn to his book among the very first when desirous of studying the remains of Armenian ecclesiastical architecture. On this matter, as on the history of Armenia since it became, and since it ceased to be, a nation, Mr. Lynch is so well informed that it is much to be desired that he should give continuity to the archæological and historical notices scattered up and down these volumes and reissue them as a connected illustrated history of Greater Armenia. But if he does so he might fitly render more justice to elements in the population that are not Armenian, and to their history. When dealing with places and events off the plateau he is evidently less well informed. A study of the history of Roupenian Armenia, for example, would show him that it resisted successfully all Seljuk attack and was finally overwhelmed by

the Egyptians. Lastly, in the field of modern politics, which play the main part in the Russian volume and a large part in the Turkish, Mr. Lynch shows himself very well informed, very observant, and possessed of most clear and decided views of his own. Perhaps he is less an impartial judge than an advocate who weakens his influence on the jury of European opinion by repeated evidence of partisanship. He will hardly believe that anyone but an Armenian, whether he be Turk, or Russian, or, least of all, Kurd, can do any good. But he is fully entitled, of course, to all his opinions, and, fortified as these are by exceptional knowledge of the history and literature of Armenia as well as of the superficial features of the land itself, they must always carry weight if not necessarily conviction. D. G. H.

PROCEEDINGS OF SOCIETIES.

Proceedings. British Association.

The Anthropological Section of the British Association for the advancement of science met at Belfast on September 11th–17th, 1902, in the Anatomical Department of Queen's College. For the use of these rooms, and for untiring personal supervision of the local arrangements, the Section is indebted to Professor J. Symington, M.D., F.R.S.E. An instructive loan exhibition of Irish antiquities, and of numerous specimens sent in illustration of papers read at the meeting, was installed in the adjacent dissecting room and anatomical museum. 112

The president of the section, Dr. A. C. Haddon, F.R.S., took as the subject of his address the question of "Totemism." The address will be found printed in full in the *Proceedings of the British Association* (Belfast) 1902, and in a current number of *Nature*, and a full abstract is given in the *Times* of September 12th.

The papers and exhibits were more numerous than usual; and the discussions of them were well sustained, and of more than average value. In the summary which follows, every paper is given by title; wherever it has been possible to ascertain in what form a paper is to be published in full, a reference has been added, and the summary of its contents curtailed or omitted; and in other cases, where it is not clear whether the full text will be published in the form in which it was communicated at Belfast, an abstract, more or less ample has been added. All "Reports" will be found printed in full in *Proc. Brit. Assoc.* (Belfast) 1902 (London; Murray: to be issued early in 1903), where also will be printed official abstracts of nearly all the papers. The principal papers and discussions are summarised in the *Times* of September 12th–18th, and a general review of the meeting is given in the *Times* of September 22nd.

Method and Organization.

Report *of the Committee on an Ethnographic Survey of Canada.*—The Committee reports that the Royal Society of Canada has appointed a strong committee to approach the Dominion Government and the Provincial Governments, with the object of placing the ethnographic survey of Canada on a permanent basis. Report of progress is made by the secretary, Mr. C. Hill Tout, in regard to his study of the natives of British Columbia. (*See* Ethnography below.)

Report *of the Committee on the Registration of Anthropological Photographs.*—An *interim* report of progress in organization during the past year.

W. H. Holmes.—*On the Classification and Arrangement of the Exhibits in an Anthropological Museum.* To be printed in full in *Journ. Anthr. Inst.*, XXXII.

E. N. Fallaize.—*Suggestions for the Classification of the Subject-matter of Anthropology.* To be published in full in Man.

Anthropography.

Professor D. J. Cunningham, M.D., F.R.S.—*Cornelius Magrath, the Irish Giant.* The skeleton of Magrath was exhibited, by special permission of Trinity College, Dublin. Magrath was born in Tipperary in 1736, and died in Dublin in 1760; his stature was 7 ft. 5 in., but he seems (in spite of some contemporary advertisements) to have been decrepit, knock-kneed, and nearly blind. Professor Cunningham discussed the question of the relation of giantism to the disease known as acromegaly, in which the face, hands, and feet become enlarged; and supported Dr. Woods Hutchinson's view that the two abnormalities are closely allied. If the morbid process begins before the skeleton is consolidated, the result is general hypertrophy of the skeleton, and a "giant" results; if, however, the skeleton is already consolidated (about the twenty-sixth year) the symptoms are those of acromegaly. The paper will shortly be published in full in Man.

Professor A. F. Dixon, M.B., D.Sc.—*On a Skull modified by Acromegaly.* The skull was exhibited, and the inferences from it agreed with those of Professor Cunningham's paper. Comparison was made with the skull of the Egyptian King, Hen Nekht (Man, 1901. 127), who appears to have been attacked by acromegaly.

Report *of the Committee of Anthropometric Investigations among the Native Troops of the Egyptian Army.* This committee was appointed at Glasgow, 1901, and has enabled Dr. C. S. Myers to carry out extensive anthropometric observations, with the full approval and active concurrence of the Egyptian Government. Sufficient data have been collected to permit of the preparation of a report on the physical efficiency of the Egyptian Army, which will be not only valuable to anthropologists, but also of great practical utility. The report describes the methods employed, and the area covered by the operations, and will be printed in full in the *Proceedings* (abstract in the *Times* of September 16th); but the publication of the results is postponed.

J. Gray, B.Sc.—*Measurements of the Indian Coronation Contingent.* This paper will shortly be published in full in Man.

Report *of the Committee on a Pigmentation Survey of the School Children of Scotland.* This is an *interim* report, and describes the methods of procedure and organization which are adopted in the survey.

J. F. Tocher, F.I.C.—*Note on some Measurements of Eskimo of Southampton Island.* Man, 1902. 115 (below).

C. S. Myers, M.D.—*Note on a Method of Radial Craniometry.* The instrument employed permits the measurement of radial lines from the ear-holes to the points usually chosen, and of the angles made by these with the horizontal plane. To be published in full in Man.

Professor J. Symington, M.D., F.R.S.E.—*Exhibit illustrating Physical Anthropology.* This exhibit is a printed but unpublished work by John Grattan, printed about 1860 in Belfast by Marcus Ward & Co. It is illustrated by numerous plates, and contains an ingenious method of measuring skulls. To be published more fully hereafter in Man.

Professor J. Symington, M.D., F.R.S.E.—*Demonstration in the Anatomical Museum of Queen's College, Belfast.* This demonstration, which took place concurrently with the ordinary session, was a new departure intended to afford additional facilities for the treatment of detailed questions of anthropography. The demonstration was well attended, and led to profitable discussion; and provides a precedent, for the relief of a congested programme, which might be followed with advantage in future years.

Ethnography.

Ethnographical papers were fewer than usual, but those which were read were distinctly above the average level.

AUGUSTINE HENRY.—*On the Lolos of Western Szechuan.* The paper describes the various aboriginal, Shan, and Tibetan tribes on the western border of Szechuan. The peculiar script of the Lolos is described and discussed. The paper will be published in full in *Journ. Anthr. Inst.*

T. N. ANNANDALE and H. C. ROBINSON.—*The Races of the Malay Peninsula.* This paper will shortly be published in full in *Journ. Anthr. Inst.*

W. H. FURNESS, M.D.—*On the Ethnography of the Nagas of Eastern Assam.* To be published in full in *Journ. Anthr. Inst.*

C. HILL TOUT.—*Ethnological Studies of the Mainland Halkomélem, a division of the Salish of British Columbia.* To be printed in full in the *Proc. Brit. Assoc.* (Belfast), 1902, as an appendix to the Report of the Committee on an Ethnographic Survey of Canada. (*See* METHOD, &c., above.)

PSYCHOLOGY.

W. GRAHAM, M.D.—*On the Mental and Moral Characteristics of the People of Ulster.* The main elements which have gone to the making of the Ulsterman are as follows:—(1) The foundation of lowland Scotch. (2) A very considerable English leaven which coalesced with the Scotch settlers. (3) An infusion of French blood, due to the revocation of the Edict of Nantes, for it was under Louis Crommellin, the Huguenot leader, that the linen industry was established, which has lain at the root of Ulster prosperity. Here we may find the source of a certain vivacity which distinguishes the Ulsterman from the lowland Scot. Two qualities the Ulsterman owes to his Scotch blood: (*a*) his self-reliance and independence; (*b*) his ultra-religiousness. He differs, however, from the Scot in other points, being more genial and human, not particularly clannish, and more adaptable. He is to be distinguished from the Celtic Irish in modes of speech and habits of thought; the Celt being a poetic and unpractical person; the Ulsterman nothing if not utilitarian.

Insanity from religious causes is, in Ireland, peculiar to Ulster; and epidemics of this form of brain disorder have swept through the country at intervals; notably in 1859. From a study of the asylum statistics, the author concludes—(1) that religion as a factor in the causation of insanity is confined to the Protestant population; (2) that general paralysis of the insane is practically unknown in the rural communities of Ulster, though found in Belfast; (3) that in County Armagh religion as a cause falls into the background; (4) that in Belfast insanity increases in proportion as trade prospers; though the contrary holds good of the country districts; (5) that one of the main preventible causes of insanity in Ulster is the lack of amusements and recreations. To be published hereafter in full or in MAN.

MISS A. AMY BULLEY.—*A Study in the Psychology of Primitive Man.* Sufficient information is now available with regard to primitive man to afford a general view of the trend of his ideas. By ascertaining the limits of primitive man's intellectual powers we can rule out theories as to his beliefs which are incompatible with his actual stage of development. If found weak in certain mental processes he cannot be reasonably credited with conceptions implying their free working. Investigation does not warrant us in attributing any absolute mental deficiency to primitive man. His most conspicuous failing was inability to differentiate, and the results of this deficiency were: 1. Inability to generalise. 2. No distinction between essential and non-essential characteristics. 3. Imperfect understanding of cause and effect.

On applying this argument, *e.g.*, to certain theories of the origin of religious ideas, it becomes doubtful whether either (1) the worship of one supreme God, (2) phallic worship, (3) ghost-cults can be regarded as within the capacity of primitive man; and Dr. Jevons' theory of a *continuum* in religion presents similar difficulties. It is, in fact, improbable that any single idea is to be regarded as the origin of religion.

until the roof can be completed by large flagstones laid across. In some cases their very small dimensions support the tradition that they were built for a dwarfish race.

Hon. John Abercromby.—*The Oldest Bronze-Age Ceramic Type in Britain, its Closé Analogies on the Rhine, and its Probable Origin in Central Europe.* To be published in full, with photographic plates, and a summary of the discussion upon it, in *Journ. Anthr. Inst.*, XXXII.

George Coffey.—*On the Occurrence, in Ireland, of Objects of Hallstatt Types.* Bronze swords occur frequently in Ireland of the type of Pl. V. 7 of von Sacken's *Gräberfeld von Hallstatt.* Scabbard chapes also occur, like that in de Mortillet, *Musée Prehistorique*, Pl. XCVI. The Irish examples of caldrons like von Sacken, *l.c.* Pl. XX., were probably imported, and appear to have influenced the forms of the pottery; round-bottomed caldrons also occur. Pointed rivet-heads, and twisted stay-rods, like von Sacken, *l.c.*, Pl. XXIII.–XXIV., and embossed and corrugated metal work, often with concentric-circle ornament, supply further correspondences; so also certain pins, chains, pendants, and other miscellaneous objects. Iron was probably known before the close of the Hallstatt period in Ireland; and early "La Tène" monuments have been noted. The paper will be published in full hereafter.

P. J. O'Reilly.—*On the Survival of Certain Pagan Symbols on Early Christian Monuments in Ireland.* To be published in full in Man.

Report *of the Committee on Excavations in the Roman Fort at Gellygaer, near Cardiff.* The excavations are completed, and a full memoir is in preparation. To be published by the Cardiff Naturalists' Society. A summary of this and other Roman excavations in 1902 will appear shortly in Man.

Report *of the Committee on Excavations in the Roman City of Silchester. Insula* XXVII. was completely excavated, and also a triangular patch forming an eastward extension of *Insula* XXII. (excavated in 1899). *Insula* XXVII. contained three houses, two of which had been subsequently enlarged, and showed traces of a timber-framed construction of a type which survives in the neighbourhood of Silchester. The minor objects found were exhibited at Burlington House in the summer, and are deposited, as before, in the Reading Museum. A full account of the excavations will appear in due course in *Archæologia*, in continuation of the reports already printed there.

Report *of the Committee on Excavations at Knossos in Crete.* A summary account of the campaign of 1902: of which preliminary accounts have appeared already (Man, 1902, 53; *Times*, 1902, May 20; July 2; Aug. 15), while a fuller report will be found in the forthcoming *Annual* of the British School of Archæology, Vol. VIII., 1901–2.

R. C. Bosanquet.—*Excavations at Palæokastro in Eastern Crete*, 1902. The site, which includes the remains of a town and an extensive necropolis, probably represents an early capital of the eastern district of Crete. For the first time in Cretan excavations, considerable remains of the inhabitants themselves were found, and it is matter for congratulation that the British Association has seen its way to make a substantial grant in aid of systematic study both of the ancient and of the modern population of this part of the island. The paper will be published in full in the same *Annual.*

R. A. Stewart Macalister, F.S.A.—*Preliminary Note on a Prehistoric Cemetery Cave in Palestine.* To be published in Man. Cf. *Pal. Expl. Fund, Q.S.*, October 1902.

F. P. Mennell, F.G.S.—*On the Khami Ruins, near Bulawayo, Rhodesia.* To be published, later, in Man.

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PREHISTORIC EGYPTIAN CARVINGS.

ORIGINAL ARTICLES.

Egypt. With Plate L. Petrie.

Prehistoric Egyptian Carvings. *By W. M. Flinders Petrie, D.C.L., LL.D., Edwards Professor of Egyptology at University College, London.* 113

The accompanying photographs of carvings have not yet been published, and such work is so rare that it needs to be put on record. Each object is shown on one side in the upper half with Arabic figures, on the other side in the lower half with Roman figures. All the objects are five-sixths of actual size.

1. A unique slate carving, bought in Cairo some years before prehistoric work in slate was discovered. The head has a lump on the forehead, which has the outline of a clenched fist, but without any details of the fingers. The reliefs upon this cannot be read as hieroglyphs, although some might be identified; the birds are indeterminate, like most of those in early use; the second sign might be *neb*, the third *maa*. The incised signs on the back differ from the others, but none can be read with certainty, though the last one might possibly be *amiut*. From the style, compared with what has since been found, I should refer this to a date shortly before the age of Mena.

2. Another carving in slate, of a fish form. The combination of the tail of the fish developed into the head of some other animal is what is now familiar to us in the prehistoric slate palettes, though this was bought in Cairo before those were known. The relief signs are linked together from opposite sides by the serpent which passes over the top edge: on No. 2 are two birds and the *neb* basket, with half the serpent; the remainder is on No. II. with a hoe, a *neb* basket, and another bird. From the work this appears to be of the same age as the previous object.

3. Carving in ivory, apparently the handle of some object. Fig. 3 should be turned with the hole end downward; then is seen a figure of the hippopotamus goddess Taurt, standing on two long thin legs, with a brief tail, grasping a crocodile by the hind leg in her right hand, and in her left hand holding the tail, which she is apparently devouring; the head of the crocodile hangs downward. No such scene of Taurt and a crocodile is known elsewhere. Fig. III. shows a dog chasing a deer. The cross lining of these figures belongs to the earlier prehistoric time, and is not found on the late carvings.

4. This small flint knife is of the usual work, one side ground, the other flaked. It is the smallest knife that I have seen highly finished. The handle appears to belong to it originally, as it agrees in size, and it is very unlikely that such a small knife and handle should be found independently. On Fig. 4 are two cerastes serpents twice crossed, caduceus-fashion, and between them two six-leaved rosettes. On Fig. IV. is a lion, a leopard, and a hedgehog. The character of this side is much like the Pitt-Rivers knife handle (*Naqada*, pl. lxxvii.) with rows of animals; but the serpents are an entirely new grouping, only coiled figures of single serpents being known before from prehistoric times.

5, 6, 7. Pendants of shell, apparently to be worn on the forehead. Many pendants are known of plain oval forms, made of shell, marble, and copper, but decorative ones are very rare. A few have a hook on the inner side of the lower end, as is seen here in Fig. V. The mat-work pattern of 5 suggests that these pendants may have been made of twisted fibre lashed together. The pendants in form of a standing female, 6, and a seated female, 7, seem from their material and nature to belong to the same age as 5, with which they were sold by a travelling dealer as being of one group. The hole for [illegible] was just below the head, and the figure has naturally broken down at so [illegible]nt. The long robe is already known to us as being worn in the earliest [illegible] probably before Mena, on some ivory figures of girls from Hierakonpolis, [illegible]f Mena on the ivory figure of a girl in the tomb of Bener-ab.

[illegible]bjects were face pendants is shown by actually finding an oval example [illegible] by all of them fitting well to the forehead, the hook coming in over

the bridge of the nose. The use of face-pendants belongs to the later part of the prehistoric age; and the well-formed figures here may well belong to the dynastic race who brought in artistic work. The use of a hook at the lower end clearly points to a face veil being suspended from it, and indicates that the latter prehistoric people wore face veils, which have been re-introduced by the Arabs into modern Egypt. The shining pendant of white shell or polished copper is evidently akin to the burnished gilt metal ornament now worn on the forehead by Egyptian women, from which the face veil is suspended.

W. M. FLINDERS PETRIE.

Crete: Fauna. **Boyd-Dawkins.**

Remains of Animals found in the Dictæan Cave in 1901. *By Professor W. Boyd-Dawkins, M.A., D.Sc., F.R.S.* **114**

The remains of the animals discovered by Mr. Hogarth in the Dictæan Cave in 1901, and sent to me for identification, present points of considerable interest. They belong partly to animals which have been sacrificed in the Sanctuary of Zeus and partly to animals which have been eaten and left in a lower stratum to form a refuse heap similar in every respect to those invariably found in caves which have been occupied by man. They form an important contribution to our knowledge of the wild and domestic animals in Crete in the Mycenean and early Greek periods.

The conditions of their discovery were as follows: The larger specimens were obtained from an untouched deposit in the atrium of the cave (*Journal of Hellenic Studies*, Vol. XVII., p. 355) three feet in thickness, which rested upon a layer of gravel. They were associated with fragments of charcoal and of pottery. Three fragments sent along with the bones belong to three flat-bottomed bowls similar to those described by Dr. A. J. Evans in the above paper. One of these, covered with stalagmite, is of thick red ware made on the wheel; another is of thin red ware, hand-made, with little stones embedded in the paste; and a third of black pottery, fine in the grain, with a polished surface.

FIG. 1. FRONTLET OF *Bos domesticus*, VAR. *creticus*.

The smaller, or refuse-heap bones, were derived from the lower stratum, and are therefore of higher antiquity than those obtained from the undisturbed layer above.

The following species have been identified: 1. *Bos domesticus*, variety *creticus*—A frontlet (Fig. 1) with two perfect horncores, from the upper deposit, belongs to a small domestic bull. It has been hacked off the rest of the skull and has probably been fixed to one of the sides of the shrine or to the altar, as a *Bucranium*.

It presents the following measurements:—

	mm.		mm.
Anterior width between horncores -	190	Length of horncore - -	180
Middle - - - -	170	Basal circumference of horncore -	167
Posterior - - - -	144	Between tips of horncores - -	490

The horncores are short, straight, and stout, and do not project beyond the plane of the frontal bones. The frontals are convex between the bases of the horncores, flattened and convex below. The horncores differ from those of *Bos frontosus*, described by Nilsson and Rütimeyer, in their shortness, and from *Bos brachyceros* (*B. longifrons*, Owen) by their thickness and straightness. They belong to neither of these domesticated breeds. They are, however, identical with those of the head of a bull on the coins of Phocis, of Thessaly, and of Samos (Ridgeway, *Early Age of Greece*, Vol. I., p. 334). The upper of three oxheads (Schuchardt, *Schlieman's Excavations*, p. 282) figured along with the head of an ape, and with cuttle-fishes on a gold ring, found in Mycenæ, bears similar though larger horncores, and probably belongs to the same breed as the specimen under consideration. The other two, with doubly curved horns, belong to the larger oxen of the type of the wild urus, the hunting and the taming of which is represented so well in the famous golden cups from the Vaphio tomb.

This frontlet undoubtedly belongs to a breed largely kept in ancient Greece, which for purposes of identification may be named *Bos creticus*.

The following remains, from the refuse heap in the lower stratum, may probably be referred to the same domestic variety of oxen. Fragments of a lower jaw, three lower jaws of calves with milk teeth, five broken long bones, two phalanges, and a broken metatarsal. Some of the bones have been scraped. One left upper maxillary with teeth was also found, and three upper teeth* :—

2. *Capra ægagrus*,† the wild goat, formerly abundant in the wild state in the Mediterranean, but now found in Europe only in Crete and some of the Cyclades, and in the higher mountains of Asia Minor, is represented by one frontlet and two perfect horncores belonging to males, a skull of a young female, and the frontlet of a kid, and one horncore of adult cut off from the head. All these are probably domesticated varieties, the sole difference between wild and domestic being a question merely of size.

In the following table the principal measurements of the horncores will be found in millimetres :—

—	He Goat.			She Goat.	—	He Goat.			She Goat.
Anterior width between horncores.	16	22	32	34	Distance of tips - -	290	—	—	100
Posterior width between horncores.	63	—	—	53	Basal measurement for front to back rounded angle.	64	63	60	18
Length of horncores -	400	400	420+	150	Measurement at right angles to this.	36	36	45	—
Basal circumference of horncores.	165	156	160	73					

The goat, *Capra ægagrus*, indigenous in the district, is frequently represented in Cretan gems, as may be seen in Figs. 25 and 67*b* of Evans' *Cretan Pictographs*, and in Fig. 16, p. 269, of *Journ. Hell. Stud.*, XVII. (A. J. Evans). In all these the long

* The teeth present the following measurements in millimetres :—

—	M 3	M 2	M 1	M 1	Pm 4
Antero-posterio length - -	25	26	20	20	15
Antero-transverse width - -	24	21	21	20	—
Postero-transverse width - -	23	20	21	20	20

† Blasius, *Fauna der Wirbelthiere Deutschlands und der angrenzenden Länder von Mitteleuropa*, *Braunschweig*, 1857, p. 485.

simply recurved horns define the species from the *Capra hircus*, a goat with doubly twisted horns figured on a coin of Delphi (Ridgeway, *op. cit.*, p. 281).

3. *Ovis aries* (Blasius, *op. cit.*, p. 467).—One large twisted horncore, with a basal circumference of 150, and a length of 312 mm., belongs to the horned domestic sheep. Six upper and eight lower jaws, and numerous refuse bones broken for food, occurring in the lower stratum, may belong either to the goat or the sheep.

4. *Cervus dama.*—Two antlers of the fallow deer, each torn from the head, and consisting of the two lower tynes and a portion of the flattened palm, were found. The smaller of these has been hacked off the head.*

The palm is broken off in both specimens. The flattening of the base of the second antler and the flattening of the upper part of the beam above it differentiate these two antlers from those of red deer (*Cervus elaphus*), with which in other particulars it bears a superficial resemblance.

5. *Sus scrofa.*—Three skulls of boar, found in the upper stratum, in the atrium, and very nearly perfect, present the following measurements :—

MEASUREMENTS OF SKULLS OF DOMESTIC AND WILD BOAR.

	Boar, Cave of Psychro.			Wild Boar.					
				Garson.	Rütimeyer.	—	Manchester Museum.		—
	1.	2.	3.						
(1) Occipital crest to alveolar point	352	340	350	400	—	—	350	350	340
(2) Basion to alveolar point -	308	298	300	357	—	—	340	342	320
(3) Basion to occipital crest -	126	110	124	132	—	—	144	140	134
(4) Inter-orbital width - -	80	82	83	84	98	95	202	113	91
(5) Length of canine alveolar process.	46	45	44	—	49	48	63	53	42
(6) Length of palate - -	216	204	216	—	258	250	243	242	252
(7) Breadth of palate - -	36	27	32	—	—	—	33	44	37
(8) Length of molar series -	112	111	108	118	120	137	112	116	112

MEASUREMENT OF TEETH OF BOAR.

	Cave of Psychro.				Cave of Psychro.		
	1.	2.	3.		1.	2.	3.
M 3.				Pm 4.			
Length - - - -	31	30	33	Length - - - -	14	12	12
Antero-transverse - -	18	18	20	Breadth - - -	13	12	13
Medio-transverse - -	16	17	17	Pm 3.			
Postero-transverse - -	11	11	13	Length - - - -	12	10	11·5
M 2.				Breadth - - -	10	10	10·5
Length - - - -	18	17	19	Pm 2.			
Antero-transverse - -	16	16	16	Length - - - -	10	11	11
Postero-transverse - -	17	17	17	Breadth - - -	7	6	10
M 1.				Pm 1.			
Length - - - -	15	14	14	Molar series to alveolus of Pm 1	117	114	111
Antero-transverse - -	14	13	14	True molar series, length - -	62	63	66
Postero-transverse - -	14	14	15				

* These measurements are as follows :—

Basal circumference -	144	128	Brow tyne to second tyne -	160	170
Length of brow tyne -	205	170	Circumference of beam -	100	78

On a comparison of these skulls with those of wild boar described by Rütimeyer (*Fauna der Pfahlbauten der Schweitz*, V., pp. 28, 56) I find that they are smaller and without the strong muscular ridges and crests which differentiate the wild from the domestic variety. The tusks, too, are proved by the small size of the canine socket to be considerably smaller, although unfortunately the canines themselves have been removed. This conclusion is confirmed also by the comparison of the measurements of the typical wild boar selected by Dr. Garson (*see* Pitt-Rivers' *Excavations in Cranbournæ Chase*, II.: *Tables of Test Animals*) and with three skulls of wild boar in the Manchester Museum, Owens College. They may therefore be referred to the domestic boar, which occurs, as Dr. A. J. Evans notes, among the Cretan pictographs.

The remains of the domestic hog also are represented in the lower stratum of gravel by a lower jaw with three molars, a lower canine, an incisor, two broken bones, and the shaft of a long bone belonging to a sucking pig. These are in the condition of ordinary refuse bones.

6. *Canis familiaris.*—The last animal to be added to the above list is a small variety of dog, represented by an upper jaw with an abnormal upper true molar, discovered in the lower stratum of gravel.

The remains of all the animals found in the upper stratum, the domestic ox, the goat, the horned sheep, the fallow deer, and the hog were parts of offerings to Zeus, while the dog from the lower stratum may belong to an earlier period in the history of the cave. when it was used as a habitation and before it was used as a shrine of the Dictæan Zeus. The perfect condition of the offerings contrasts strongly with the fragmentary remains of the refuse heap. W. BOYD-DAWKINS.

Eskimo. Tocher.

Note on some Measurements of Eskimo of Southampton Island. 115

A Paper read at the Belfast Meeting of the British Association, September 15th, 1902. *By J. F. Tocher, F.I.C.*

In the following note the results are given of an analysis of the measurements of 35 adult male Eskimo taken at my instigation by Captain A. Murray and Mr. W. J. Tocher of the whaler "Active" at Southampton Island, Hudson's Bay, on the 24th August, 1901. These figures will be useful for comparison with the numerous measurements of Eskimo skulls, while they are interesting in themselves, being confirmatory to a large degree of former measurements of the living head. The measurements recorded were those of stature, maximum head (glabello-occipital) length, and maximum head breadth. The colour of the hair and eyes, the shape of the nose and face, and the appearance of the lips and cheek bones were also recorded. Observations were made on eight male children, one half-breed male, and one female, but are not dealt with here. The average of each dimension, the mean cephalic index, and the standard deviation have been calculated and contrasted where possible with former results. The standard deviation of a group from the average—a method of ascertaining the purity or otherwise of race already applied in a former paper—is exceedingly valuable, as the smaller the deviation is, the nearer the group approximates to the average characteristic. The average stature of the 35 Eskimo was 1,620 mm. The stature varied from 1,486 mm. to 1,740 mm. The greatest individual deviation was 134 mm. below the mean. The standard deviation amounted to 68·4 mm. or 4·2 per cent. The average head length and breadth of the group amounted to 192·4 mm. and 148·5 mm. respectively, the standard deviation in each case being 6·3 mm. and 4·84 mm. or 3·3 per cent. in both cases. The head lengths ranged from 179–205 mm., and the breadths from 140–161 mm. The cephalic index of the group was 77·2, with a standard deviation of 8·36 or 2·89 per cent. The cephalic index of individuals ranged from 69 to 82.

TABLE OF MEAN MEASUREMENTS—ESKIMO.

Averages.	Eskimo, Southampton Island, 35 Males. (Tocher and Murray, 1901.)	Eskimo of Labrador (from Deniker).	Eskimo of Greenland (from Deniker).	Eskimo of Alaska (from Deniker).
Stature	1,620·0 mm.	1,575 mm.	1,621 mm.	1,630 mm.
S. D.	68·4 „			
S. D. per cent.	4·2 „			
Range	1486–1740·0 „			
Sitting height	852·0 „			
S. D.	40·4 „			
S. D. per cent.	4·7 „			
Range	736–914·0 „			
Head length	192·4 „	Mean Max. L. 194·6 mm. (Virchow.)		
S. D.	6·3 „			
S. D. per cent.	3·3 „	191·1 mm. (Duckworth.)		
Range	179·205·0 „			
Head breadth	148·5 „	Mean Max. Br. 144·2 mm. (Virchow.)		
S. D.	4·8 „			
S. D. per cent.	3·3 „	147·6 mm. (Duckworth.)		
Range	140–161·0 „			
Cephalic index	77·2 C.I.	74·1 C.I. (Virchow.)	76·8 C.I.	74·8 C.I.
S. D.	8·4	77·0 C.I. (Duckworth.)	72·5 (Crania.)	(Aluits. 84·8.)
S. D. per cent.	2·9		71·4 C.I. (Crania—Turner.)	
Range	69–82·0			
Colour of hair	Black			
S. D. per cent.	0			
Colour of eyes	Brown			
S. D. per cent.	0			
Shape of nose				
Straight	48·6 per cent.			
Flat	51·4 „			

The observers have recorded that while the nose is very much flattened, 18 out of the 35 (51·4 per cent.) are distinctly flat nosed, and 17 (48·6 per cent.) may be classed as straight. The colour of the eyes does not vary from brown, while the colour of the hair is universally black. It will be interesting to compare these results with former observations. Virchow (*Zeitschrift für Ethnologie*, 1880, XII., 272) gives the complete measurements of five Eskimo from Labrador. The mean stature was 1,596 mm., the mean head length 194·6 mm., and the breadth 144·2 mm. Duckworth and Pain (*Proc. Cam. Phil. Soc.*, Vol. X., Part V., 286) measured a party of 27 Labrador Eskimo in 1899. The mean principal measurements were as follows :—Stature, 1,577 mm. ; head

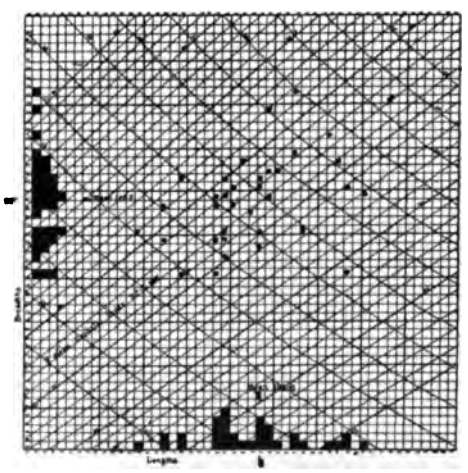


FIG. 1. DIAGRAM OF HEAD-FORM.

length, 191·1 mm.; head breadth, 147·6 mm. Deniker gives the mean stature of 614 Eskimo of Greenland as 1,621 mm., and the mean cephalic index as 76·8. The mean stature and cephalic index of the group under consideration correspond closely to the foregoing figures—stature, 1,620 mm.; index, 77·2; while the mean head length and breadth approximate very closely to Duckworth and Pain's figures. Now on referring to skull measurements, the mean cephalic index of the crania in Sir William Flower's catalogue is 72, while Sir William Turner gives 71·4 as the mean index of 22 adult Eskimo crania in the Anatomical Museum of the University of Edinburgh. Duckworth (*Journ. Anthr. Inst.*, XXX., 1900, 137) gives the mean cephalic index of ten Eskimo skulls from Labrador and Greenland in the Anatomical Museum at Cambridge as 71·8. The index for Greenland crania alone was 72·5. Deniker's figure is 72·4 and for Western America 74·8. On examining the stature curve (which is pretty regular) in diagram No. 2 one observes that the mode is considerably above the mean. This seems to point to an admixture of two types. This is borne out by the nose types and by the head lengths and breadths, maxima occurring in the lengths at 189 and 193 mm. and in the breadths at 145 and 150 mm. (Fig. 1). Without entering into a discussion as to the original home of the Eskimo or Innuit, it is interesting to note that Boas concluded the district around Hudson's Bay as the most likely. In these observations we have the inhabitants of that district, the birthplaces being stated as Rowes Welcome, Hudson's Strait, Repulse Bay, and Foxes' Channel. J. F. TOCHER.

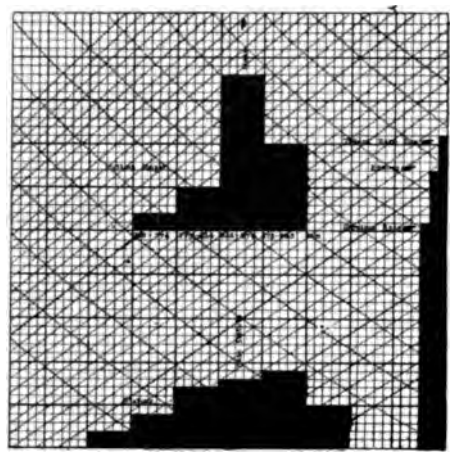


FIG. 2. DIAGRAM OF STATURE.

Brain. **Cunningham.**

Right-Handedness and Left-Brainedness. *An Abstract of the Huxley Memorial Lecture for* 1902, *by D. J. Cunningham, M.D., D.C.L., F.R.S.* (*cf.* MAN, 1902. 124). *The full text of the Lecture with plates and other illustrations will be found in Journ. Anthr. Inst.*, XXXII., p. 273. **116**

In introducing the subject which he had chosen for the address, Dr. Cunningham pointed out the great general interest it presented to the student of anthropology, no matter what branch of this many-sided science he might specially be engaged in. The physical anthropologist could not lay claim to the subject as one which concerned him alone. Language, social and religious rights, and man's handicrafts through the whole period of his existence, had been profoundly affected by the supremacy of the right hand —an attribute of man which had unquestionably been alike useful in times of warfare and in times of peace.

It was easy to prove that the characteristic was one of vast antiquity: of this there was the clearest evidence, not only in historical records and pictorial representation, but also in ancient mythology and in the structure of almost all languages.

So far back, then, as history took us right-handedness would appear to have been a common birthright of mankind. But if we probed the dim obscurities of the past to still deeper depths, and extended our inquiries to periods antecedent to those of which we had historical knowledge, there was evidence, although perhaps not so clear, that the same preferential use of the right arm had even then been a characteristic of man.

The general conclusion arrived at was that, in early times, before manipulative skill was greatly developed, there was every reason to believe that the difference between the

two limbs was not nearly so accentuated as it was at present, and that there was a much stronger tendency towards reversion to true ambidextry, or the condition which we regarded as being an original characteristic of the stem-form of man.

It was a matter of common knowledge that the more extensive use to which the right upper limb was put reacted upon its development and caused it to assume more massive proportions than its fellow of the left side.

Dr. R. Lehmann-Nitsche had found that the bones of the right upper limb of prehistoric man of Southern Bavaria were distinctly heavier and more massive than the corresponding bones of the opposite side. This might be regarded as affording proof positive that these early individuals were right-handed.

It appeared probable that right-handedness had assumed form as a characteristic of man at a very early period in his evolution and most likely at a time before he had become endowed with articulate speech. It was a characteristic of all communities, no matter how isolated they were, that it was always the right arm which was raised to the place of higher power and importance. There were few who would dispute that it was an inherited quality ; and, further, that left-handedness also appeared to be hereditary to some extent and to run in families.

The information afforded by the experiments of Professor Mark Baldwin on his own child in regard to the period in the evolution of man at which right-handedness became a fixed and permanent characteristic was dwelt upon.

These experiments were interesting from another point of view. In the early months of infancy the motor paths in the brain and the spinal cord had not attained their full functional capabilities. Until this was effected and the paths were practised by continuous effort, impulses originating in the brain could not flow with any degree of freedom to the lower motor centres in the spinal cord from which the nerves which supply the muscles of the limbs proceeded. At first, therefore, muscular efforts in an infant were more or less purely automatic, and it was not to be expected that a characteristic such as right-handedness would become manifest until the paths which connected the higher and lower motor centres were fully established and had been systematically practised.

Right-handedness was an inherited quality in the same sense that the potential power of articulate speech in man and of song in the bird were inherited possessions. Every normal child was provided with the complicated brain and nerve mechanism which was required for the successful acquisition of speech, and yet unless these nerve-centres and nerve-paths were brought into play and practised by the education which every generation gave to the succeeding generation no outward manifestation of his potential power would result. The song of a bird appeared to be established on a precisely similar footing ; and showed how marvellously the nerve and muscle mechanism of certain hereditary powers was arranged and how even in the most distinctive functions of a species education and practice were necessary for calling these functions into play.

The conditions which led to the right hand having been advanced by the selective force of evolution to the place of pre-eminence was next discussed. There could not be a doubt that, as Dr. Buchanan had pointed out forty years ago, the right side of the body, in so far as the operations of the right arm were concerned, possessed certain mechanical advantages. Yet, as Pye Smith and others had shown, the occasional transposition of the thoracic and abdominal viscera in the majority of cases caused no disturbance of dextral superiority as manifested in the right upper limb.

Right-handedness was a character which had been attained in the ordinary course of the evolution of man by the subtle process of natural selection. Although the matter had not been investigated so fully as to place the question outside dispute, the evidence at our disposal favoured the view that at birth the two upper limbs started upon their individual duties equally endowed in so far as strength of muscle and size

of bones were concerned. Both in mass and weight the two limbs were, to all intents and purposes, similar at birth, and the preponderance in bulk and strength, which later on distinguishes the right arm, was acquired during life, and was caused by the greater amount of work it was called upon to perform.

All the evidence at our disposal went to show that right-handedness was due to a transmitted functional pre-eminence of the left brain, and that this was the factor which prevented an oscillation of the condition from one side to the other when the viscera were reversed.

The motor paths which took origin in the cortex of the two cerebral hemispheres crossed to opposite sides of the body as they proceeded to their ultimate destinations. But it was not only in this respect that the left cerebral hemisphere stood out pre-eminent. The active speech centre was located in the left brain. A still fuller significance was given to this arrangement by the fact that in left-handed people the predominance of the right cerebral hemisphere was still further accentuated by the transference to it of the active speech centre.

The functional pre-eminence of the left brain was not a haphazard acquisition which has been picked up during the life of the individual. There could not be a doubt that the superiority of the left cerebral hemisphere rested upon some structural foundation which was transmitted from parent to offspring; and further, that the exceptional cases of right-brainedness and left-handedness, which we every now and then observed, were due to the transference of this structural peculiarity from the left to the right side, or more probably to a transposition of the two cerebral hemispheres in the same way as transposition, either partial or complete, of the thoracic and abdominal viscera occurred.

The last part of the lecture was devoted to a study on the two sides of the brain, of the development and growth-changes of the portion of cerebral cortex which has recently been mapped out by Grünbaum and Sherrington as being that which presides over the voluntary movements of the upper limb.

Method. **Petrie.**

The Use of Diagrams. *A Note in Reply to Professor Arthur Thomson* (MAN, 1902. 95). *By W. M. Flinders Petrie, D.C.L., LL.D., F.R.S.* **117**

As I see that in one instance (MAN, 1902. 95) the main point of my paper (MAN, 1902. 61) seems to have been overlooked, the same may occur in other cases. I would therefore repeat here that the system and treatment of research diagrams (which I dealt with there) is entirely different from that of expository diagrams. In research general correlations are sought for and exactitude is not wanted, but only the clearest system to use in searching. In expository diagrams, which I did not touch on, the exactitude of a few relations has to be shown.

I purposely did not expatiate on the obvious lack of equality of scales in the form of diagram I proposed, as that is of no consequence in research diagrams; and I carefully used the words "varies *with*" instead of "*as*" in writing to avoid any misconstruction; further, I said that the diagram showed ratios, &c., "*sufficiently* for all comparative purposes," that is, where mere comparison is needed, and not absolutely accurate relations. Thus I had guarded already against any suppositions that final accuracy was attained in such preliminary work; though whether any more minute accuracy is of use in present problems is very doubtful.

The exaggeration of variations, which seems to offend Professor Thomson, is a point of great value in such diagrams, and has to be brought into the design for the sake of clearness. It is not in the least of a "misleading nature" to anyone who understands the principle of "concentrated errors," which is the soul of diagram study of variations (see *Pyramids of Gizeh*, p. 238); without that no graphic reduction of triangulations could be carried out.

I hope these notes will suffice to show that Professor Thomson's objections do not concern the case of research diagrams (which was the object of my paper), but are details which I did not point out as they were so geometrically obvious. It would be a great mistake to burden research diagrams by enforcing that equality of scale in all cases which it is supposed that I had overlooked. W. M. FLINDERS PETRIE.

Method. Thomson.

The Use of Diagrams. *A Rejoinder to* MAN, 1902. 117. *By Arthur Thomson, M.A., Professor of Human Anatomy in the University of Oxford.* 118

I have little to add to what I have already stated. I may, however, point out that in his original article (61) Professor Petrie defined the research diagram as one in which the main object "is to present as many variables as possible in one view, with such clearness that the eye can grasp any two at once without being distracted by others." Furthermore, he subsequently stated (p. 82) that the results obtained by his system of triangles were sufficient for "all comparative purposes." Professor Petrie in his present note now says that in research diagrams "general correlations are sought for and exactitude is not wanted," a statement which is certainly not a repetition of his former views as expressed in his previous article (61). The Professor further adds that by "*comparative* purposes" he meant "when *mere comparison* is needed, and not absolutely accurate relations," an interpretation of his meaning which is certainly not conveyed by the words employed in his original paper. The object of my criticism of his method was to render this clear and so warn others against falling into the possible error of supposing that the results obtained were sufficient for "*all* comparative purposes." This, and this alone, must be my justification for the use of the expression "misleading nature" employed in my previous communication (95).

If the exaggeration of variations be the object of Professor Petrie's method, then there is much to be said in its favour. At the same time it should be borne in mind that correlations which are based on a system in which exactitude is sacrificed are themselves liable to be inexact. ARTHUR THOMSON.

Crete. Bosanquet.

A Mycenæan Town and Cemeteries at Palaiokastro. *By R. C. Bosanquet, M.A., Director of the British School of Archæology at Athens.* 119

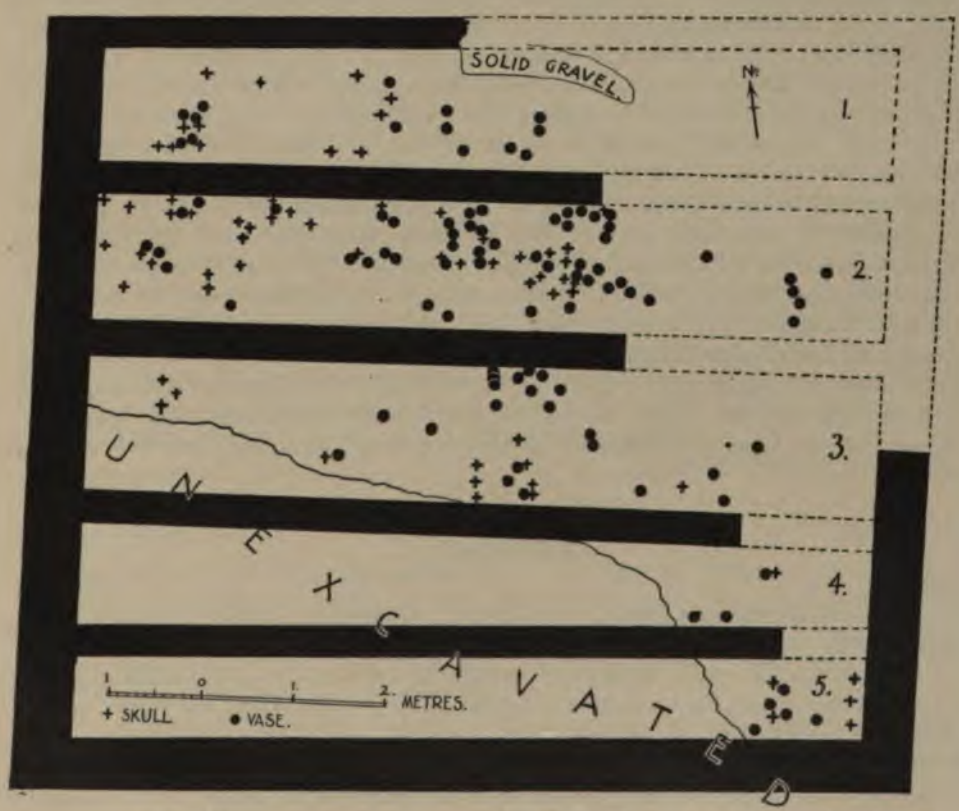
During April and May 1902 the British School at Athens undertook preliminary excavations at Palaiokastro. I was accompanied by the architect of the School, Mr. Heaton Comyn. The plain of Palaiokastro, the largest plain on the east coast of Crete, measures three miles from east to west and two from north to south. It lies north of Zakro, and north-east of Praesos, the sites explored last year by Mr. Hogarth and the British School respectively. (MAN, 1901. 147–148.)

There seems to have been no large settlement here from Mycenæan times until the middle of the nineteenth century; but in that early age it was one of the principal centres, perhaps the capital, of Eastern Crete. The excavations were rewarded by the discovery of a Mycenæan town extending over an area of at least five hundred by three hundred yards, and of cemeteries which throw new light on the burial customs of the earliest inhabitants.

The most conspicuous feature of the plain is a steep table-topped headland called Kastri, which juts out into the sea midway along the low, and in parts marshy, beach. In spite of its acropolis-like form it does not seem to have been fortified. The scanty remains on its summit are those of a very late Mycenæan village. Beneath them we found a few fragments of much earlier pottery, including some Kamárais ware. At the foot of Kastri, and sheltered by it from the north, lies a sandy crescent-shaped bay, the natural harbour of the plain. A small promontory forms the southern horn of the

crescent, and from this point southward and westward lie the extensive ruins of the Mycenæan town. A building on the southern promontory, constructed of enormous limestone blocks, may be the "Palaiokastro" which gave its name to the place. The principal ruin field is called Roussolákkos, *the red hollow*, on account of the red earth formed by the disintegration of the Mycenæan brickwork. It is cut in two by a ridge running north and south on which are the earliest cemeteries. The houses near the sea are built on the gravel cliff and are humbler in character and apparently older than those lying inland. One of them yielded evidence of a primary and secondary occupation, fine pottery of the Knossian Palace style being found beneath the higher floor level. Another contained whole vases of the Kamárais style, but nothing Mycenæan in the strict sense.

The largest of the houses which were examined lies inland, in a group of what appear to be spacious upper-class houses; they are constructed partly in the "megalithic" style, characteristic of the Mycenæan homesteads so common in the limestone districts of Crete, partly in regular ashlar masonry; the upper storey, where one existed, was of brick. The plan of this house is perfectly intelligible, and in some respects anticipates that of the Greek house of classical times. The entrance is from a large courtyard into an L-shaped *megaron* twenty-five feet long, the roof of which was supported on four columns placed round a cemented *impluvium*, six feet square. The *megaron* can have had no windows and derived its light almost entirely from this hypæthral opening. Four doorways give access from the megaron into other living-rooms, one of them containing a sunken bath-room, a reproduction in miniature of those found in the palaces at Knossos and Phaestos. In all thirty-six rooms were excavated here, of which twenty-two lie within the megalithic walls of the original mansion, and the remainder round a second courtyard. The house was originally one-storeyed. Later



PALAIOKASTRO: BURIAL ENCLOSURE (*see description overleaf*). [171]

an upper storey was added in brick, with two staircases leading to it, one of them over six feet wide. This principal staircase ascended to a richly decorated *megaron*; the rooms below it were full of fallen masses of fresco, and of wall-revetments of polished schist; and in one of them there was found a large column base, fallen from the upper floor and lying in the earth some feet above a smaller column base *in situ* in the ground floor. At the time of the construction of the upper storey some of the ground floor rooms were converted into magazines. One of them has a plaster floor painted in colours, and a stone bench against the end wall. This and an adjoining chamber yielded over 500 vases. Among the smaller "finds" are a well-preserved tablet inscribed with characters in a linear script nearly related to that of Knossos, a pair of "sacred horns" in stucco, and jars containing wheat and two kinds of pease.

Still more important results were obtained in the cemeteries. Hitherto we were very imperfectly informed as to the method of sepulture practised by the Cretans of the Kamárais period; and graves containing Kamárais pottery were practically unknown. Of the beehive tomb, the typical tomb of Mycenæan times on the mainland, only one example was discovered. It is cut in the clay subsoil and approached by a passage twenty-five feet long. It yielded six late Mycenæan vases and three bronze implements, a dagger, a knife, and a razor. As a rule, the Mycenæan inhabitants seem to have laid their dead in small family burial-places near their homesteads. Groups of two or more earthenware *larnakes*, shaped like bath-tubs or coffers with gable-lids occur in many parts of the plain. These had contained not complete corpses, but bones which were removed from the earth, when time sufficient to decompose the body had elapsed after the original interment. A similar custom still prevails in the island. A still older form of this practice was illustrated by a very remarkable enclosure discovered on the ridge which cuts the town site in two. It is a rectangle (*see* diagram, p. 171) measuring twenty-seven feet by thirty-two, enclosed by a wall of rude limestone blocks, and subdivided by similar walls into five parallel compartments, within which were packed skulls, bones, and vases, principally cups. The date of the deposit is given by the vases, many of which are good examples of Kamárais ware, with a brilliant decoration of white and red on a black ground, and by a three-sided seal bearing pictographic characters. There was also an unique series of miniature vessels carved out of marble, steatite, and alabaster, and of earthenware vessels painted in imitation of them. The bones were in heaps or bundles, not laid in their natural order. The skulls had been transported from their previous resting-place with some care, but for the other bones there was no rule; in some cases the heap beneath the skull seemed to represent a complete individual, in others the minor bones were almost wholly wanting. Sometimes the principal bones were formed into a kind of bed on which several skulls were laid. A second and apparently similar bone enclosure has been discovered and will be excavated next spring, when it is hoped that a physical anthropologist may form one of the exploring party, and report on the skulls found in both seasons' work. A full account of the excavations, with plans and drawings by Mr. Comyn, will appear in the *Annual of the British School at Athens*, Vol. VIII.

R. C. BOSANQUET.

REVIEWS.

Persia. **Sykes.**

Ten Thousand Miles in Persia. By Major P. Molesworth Sykes. London: Murray, 1902. 24 × 15. Pp. xv + 481. Price 25*s.* net. **120**

This is one of the most interesting records of Oriental travel which has appeared for many years. Persia has been described from many points of view, and Lord Curzon's monumental volumes will long be referred to as a storehouse of information on that land; but Major Molesworth Sykes has traversed routes as yet undescribed, and shows a knowledge of the people and an appreciation of the nature of the country not to be easily

matched among modern travellers. No work on Persia has been so well illustrated ; the views and groups being mainly taken from the author's own photographs. Persians, Parsis, Turkomans, Arab nomads, Baloches, and gypsies figure in these groups, which are of the greatest interest.

Students of geography, history, and ethnology will find new and important matter in these pages. The conclusions arrived at by Major Sykes as to the routes of Alexander and Marco Polo are based on original research and personal knowledge of local conditions, and they probably will be generally adopted. His unique and remarkable enquiry into the history of the game of polo, also, cannot be passed by without mention.

To the ethnologist the information given will prove of the greatest value. The manner in which tribes of diverse origin are scattered over modern Persia is vividly brought before us. For instance, we find Turkoman tribes, such as the Afshār and Karā Koinlu, in the very south of Karmān province (p. 428) side by side with nomads of true Persian descent, Baloches, and dark Bashākirdī aboriginals who suggest the natives of Southern India (p. 308) ; while far to the north in Kain (p. 404) we find a community of Arab descent, still speaking Arabic. It does not, of course, follow that such tribes may not be mainly Iranian in blood, as the Turkish-speaking Azarbaijānī Tatars have been shown to be, but the persistence of foreign languages among tribal communities is not a factor to be neglected.

Major Sykes deals very fully with Sistan ; no such accurate account of the country or its people is to be found elsewhere. Few travellers have taken the trouble to record all the tribes, their subdivisions and their affinities, and the information on such points in works like *Eastern Persia* and *From the Indus to the Tigris* is fragmentary and unsatisfactory. The province of Karmān is naturally very fully dealt with, and the Baloches receive special attention, many details being given as to their tribes in Persian Balochistan which have not been hitherto available. Major Sykes confirms the conclusions I have already arrived at independently* as to the derivation of the Baloch tribes from the neighbourhood of the Caspian Sea ; although he gives more importance than I am inclined to do to the Arab element among them. It is clear from his observations, and those of Sir T. Holdich, that there is in Mekran and Persian Balochistan a distinction between the upper and lower ranks of Baloches which I have not observed among the tribes near the Indian frontier. This may possibly be explained by the great migration of the fifteenth and sixteenth centuries, which drew off towards India the greater part of the true Baloches, leaving behind only a fraction who maintained their supremacy over a non-Baloch, indigenous population, darker than themselves and with features rather of the South Indian type. This element is hardly to be found among the tribes of the Sulaimāns, where chiefs and tribesmen are all much of the same type.

Many other questions of interest, with which it is impossible here to deal, are suggested by the facts recorded by Major Molesworth Sykes. *Ten Thousand Miles in Persia* is a storehouse of information on all such points, and it is also, it must be noted, a most animated and well-written record of travel and adventure.

M. LONGWORTH DAMES.

Africa, East. **Fülleborn.**

Anthropologie der Nord-Nyassa-Länder. By Dr. F. Fülleborn. Being Vol. VIII. of Deutsch Ost-Afrika. Berlin : Dietrich Reimer. 1902. Price, 40 m. **121**

This monograph is of the greatest importance to all who are interested in the physical characters of the races of Africa. It is in portfolio form with 64 plates, comprising over 300 photographs of natives.

The author has followed the method of Prof. v. Luschan with regard to the various measurements enumerated in the text, and great care has been taken to ensure accuracy

* In a paper recently read before the Royal Asiatic Society.

in the minutest details. The area in which Dr. Fülleborn has worked is the corner of German East Africa bordering on Lake Nyasa, consequently his observations tend to complete the forging of the chain of knowledge commenced by the labours of Dr. Fritsch, Count von Schweinitz and Sir Harry Johnston. North Nyasaland contains a great variety of tribes, the stronger occupying the more fertile plains while the weaker have been driven into the Livingstone Mountains and the plateau between lakes Nyasa and Tanganyika. Several pages of the text deal with the history of this part of Africa prior to the European occupation, the origin and migrations of the various sections of the populace being traced as closely as possible. The author points out which groups are comparatively pure blooded and which are composed of members of various scattered tribes fused into a political entity by the personality and prowess of powerful chieftains. The Wakinga and Wamahassi belong to the former and the Wahehe to the latter category. The Wahehe have not like the Wangoni any claims to Zulu ancestry, as has been supposed by some, though even among the latter Zulu blood exists in any purity only among the aristocracy. Customs and weapons cannot be taken as a test of origin for tribes overthrown by wandering Zulu hordes have in many cases adopted much of the social organisation and methods of warfare of their former conquerers. The measurements of Dr. Fülleborn seem to point to a fundamental unity among the peoples of this territory as is shown by a serration of the cephalic index constructed from his data.

Cephalic Index	Wanyak-yassa.	Wassako, people of the Konde Plains.	Wantali.	Fisherfolk on the Shores of Lake Nyasa.	People of the Plateau between Nyasa and Tanganyika.	Wahehe.	Wabena.
69	1	2	—	1	1	—	1
70	3	1	1	—	—	1	—
71	—	—	2	—	1	4	2
72	2	4	6	1	3	3	3
73	4	2	2	2	2	2	3
74	13	5	5	4	4	3	1
75	12	7	3	5	4	4	3
76	4	4	1	3	3	2	2
77	6	3	4	1	2	1	2
78	7	6	—	4	1	1	1
79	—	—	1	3	3	1	5
80	—	3	—	1	2	—	1
81	2	1	1	2	2	—	—
82	—	—	—	2	—	—	1
83 and over	2	—	—	—	—	—	—

The data in the present monograph may advantageously be contrasted with those of other observers by means of a table of percentages.

Tribes.	Dolichocephalic.	Mesaticephalic.	Brachycephalic.
North Nyasa tribes (Fülleborn) - -	40·1	51·9	8
Bantu tribes of Central German East Africa (Schweinitz).	54	39·5	6·6
Bantu tribes of Uganda (Johnston) - -	60·8	35·8	3·5
Bantu tribes of the Middle Congo (Mense) -	59	38	3

This shows not only an increased frequency of dolichocephaly as one passes northward, but also the absence of the broad-headed element in Southern Africa.

Similar results follow a study of other indices and although in these somewhat greater variations occur, in all, homogeneity rather than heterogeneity is the dominant note. Should subsequent observations confirm those at present available, we may look on the Bantu peoples as a physical as well as a linguistic unity. F. C. SHRUBSALL.

Caucasus. **Merzbacher.**

Aus den Hochregionen der Kaukasus. By G. Merzbacher. Leipzig: Duncker and Humblot, 1901. 2 vols., 8vo., pp. xxxvii, 957; ix, 963. Price, £2. **122**

The greater part of this excellently-got-up work is devoted to geographical questions. Only two chapters are devoted to some of the ethnographical questions of the Caucasus region, and the author does not profess to give anything like an exhaustive discussion even of those questions on which he touches. In the first volume some 70 pages are devoted to the inhabitants of the highlands. The chapter opens with a useful four-page bibliography of the more important works on the ethnography of the district (the general works will be found in the preface, pp. xxvi and xxix), and deals very briefly with a large number of different tribes. The author concludes that the peoples of the southern slopes of the Caucasus are of Karthwelian race, while those of the northern slopes are partly of Ural-Altaian, partly of unknown origin.

The second volume contains a quantity of information about the customs and beliefs of the Chewsures and allied peoples. Amongst other items are details on the blood feud and wergeld and other legal customs, and a description of the house. The marriage customs are described in some detail; according to the author the bride remains a whole year in her parents' house after the marriage, and during this period the husband may not even enter the village. The custom which insists that the newly-married couple shall only meet in secret till the birth of their first child is also observed, and it is held to be disgraceful if the first child appears on the scene less than three years after the marriage ceremony. There is also information regarding the priesthood, and a class of female soothsayers known as *Mesultas*, who are said to derive their information from the souls of the departed. The dead are unclean, but the uncleanness is only inherent in the body, the soul itself is clean; the mourning and funeral feasts are described in some detail. There is a brief account of the ideas as to a future life, some of the details of which seem to be derived from Islam. In addition to the two chapters, whose contents are here briefly indicated, many other facts will be found in the narrative chapters. For the benefit of those who do not care to tackle a book of nearly 2,000 pages, the author has provided detailed headings to the chapters and an index. One cannot too highly commend the index to these volumes. It is a truly monumental work; nearly 120 pages with double columns of text cannot be called short measure. Would that other authors were equally painstaking! Unfortunately the list of errata is on a somewhat similar scale; it occupies ten pages.

The print is good, and most of the illustrations are excellent. If there is a fault to be found with the volumes it is that they are too heavy to be convenient, and the backs are hardly equal to the strain. N. W. T.

Malay: Ipoh Poisons. **Geiger.**

Beitrag zur Kenntnis der Ipoh-Pfeilgifte. By Paul Geiger. Basel: M. Werner-Riehm, 1901. 24 x 17. Pp. 103, with three plates and map. **123**

Under this heading Dr. Geiger has brought together and thrown into the form of a Ph.D. thesis many of the hitherto scattered records of the use of blowpipe dart poisons in Malaysia. He also records the results of his own investigations of the chemical composition of a number of these poisons.

The 1051 pages of which the work consists are divided into nine sections. [illegible] two of these on the history and preparation of the poisons in use in the [illegible] selected to [illegible] are the most adequate, while the fifth section, devoted to the manuf[illegible] and use of poisoned darts and of apparatus connected with their use, is, perha[illegible] [illegible] Three methods of using the poison or poisons—for the author [illegible] the word poison in the narrow sense—are recognised:—

[illegible]

[illegible] blowpipe dart poison

[illegible] poison. The use in this manner is [illegible] and seems [illegible] the Moluccan Islanders and the Semang of northern Perak: the [illegible] Veddas also using blowpipes.

[illegible] the internally poisoning poison [illegible] of bow and [illegible] the Moluccas and darkness of the Peninsula.

[illegible]

The 103] pages of which the work consists are divided into nine sections. The first two of these—on the history and preparation of the poisons in use in the region referred to—are the most adequate, while the fifth section, devoted to the manufacture and use of poisoned darts and of apparatus connected with their use, is, perhaps, the most interesting. Three methods of using the poison or poisons—for the author understands the word *ipoh* in no narrow sense—are recognised :—

(1.) As a blowpipe dart poison.

(2.) As an arrow poison. (Its use in this manner is very local and seems limited to the Mentawi Islanders and the Semang of northern Perak ; the latter, according to Wray, also using blowpipes.)

(3.) To poison the laterally projecting point of a simple form of bow trap in use among the Mintras and Jakuns of the Peninsula.

Many forms of darts, varying according to their *provenance* and purpose, are described and figured, as well as quivers and palettes for spreading the poison when in a pasty condition. Particular attention is paid to the substance wrapped round or threaded on the butt of the dart in order that the latter may accurately fit the blowpipe.

The blowpipe or *sumpitan* is rather hastily passed over ; it is certainly inaccurate to say (p. 33.) " most sumpitans . . . possess a removable mouthpiece," while it is generally recognised that the inner tube of the blowpipe of the Peninsula if not made of a single internode of *Bambusa longinodis*, or a species of similar habit, is made by splicing two suitable internodes and not as is here (p. 32) suggested by carefully rubbing down the nodal septum between two adjoining internodes. The geographical distribution of poisoned darts and of *Antiaris toxicaria* is discussed and illustrated by a map. The little known *umei* poison of Mentawi is derived from this celebrated tree, found also in Ceylon, where there is no evidence of its properties being known, or at least made use of, by the Veddahs. A list of plants which have at one time or another been described as entering into the constitution of dart poisons of the Malay Peninsula or Archipelago is then given, and the work concludes with a full description of the chemical investigations already alluded to. An excellent list of references is appended, while the three plates illustrating the thesis are so excellent that they should be studied by daylight, much of the finest detail being invisible even by strong artificial light. C. G. SELIGMANN.

PROCEEDINGS OF SOCIETIES.

Huxley Memorial Lecture. Anthropological Institute.

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The third Huxley Memorial Lecture of the Anthropological Institute was delivered in the Lecture Theatre of Burlington House, on Tuesday, 21st October 1902, at 5.30 p.m. ; the President of the Institute, Dr. A. C. Haddon, F.R.S., in the chair.

The lecturer was Prof. D. J. Cunningham, M.D., D.C.L., F.R.S., of Trinity College, Dublin, who took as his subject, *Right-Handedness and Left-Brainedness.* An abstract of the lecture will be found above (MAN, 1902. 116), and the full text with plates and other illustrations in *Journ. Anthr. Inst.*, XXXII., p. 273.

At the close of the lecture a vote of thanks proposed by Mr. Thomas Bryant, M.A., F.R.C.S., and seconded by Dr. Pye Smith, F.R.S., was tendered to Prof. Cunningham for his lecture, and the Huxley Memorial Medal of the Institute was duly presented.

Mr. J. L. Myres, secretary, exhibited a palm leaf copy-book and praying flag from Darjeeling and an example of Benares brasswork.

Special Meeting, 28th October 1902. Dr. A. C. Haddon, F.R.S., president. Dr. W. H. Furness read a paper *On the Ethnology of the Nagas.* The paper was discussed by the President, Messrs. Lewis and Gomme.

Printed by EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.

CLAY TABLETS FROM CAVES IN SIAMESE MALAYA.

ORIGINAL ARTICLES.

Malay Peninsula. With Plate M. Steffen: Annandale.

Clay Tablets from Caves in Siamese Malaya. *By A. Steffen. With Notes by Nelson Annandale.* 125

Last May at Kantang I obtained about forty clay plaques for the Oxford University Museum from Mr. Steffen, who also gave me the following notes. Together with the plaques were the cooking-pot from Kao Sai that is referred to in the notes, some fragments of very coarse and gritty pottery, and a number of Buddhist statuettes and engraved copper plates from Kao Wat Han. The statuettes, which are of bronze and wood, are of rude design and workmanship, but Mr. Steffen, who is well versed in Siamese Buddhism, does not consider them ancient. The plates have one or more Buddhist figures of the current type rudely scratched or engraved upon them. None of them are more than about three inches high, and they have probably been fixed to small wooden obelisks as is still done with similar plates in many of the temples of Lower Siam. There is, then, no reason to believe that these purely Buddhist votive offerings have any direct relation with the clay tablets described in Mr. Steffen's notes. The fact of a Buddhist temple having fallen into disuse and neglect does not necessarily argue any great antiquity, as this commonly happens in Lower Siam when any untoward accident befalls the monks connected with it. I have myself seen a temple that had been left unfinished owing to some occurrence of the kind though a new one was being built a few yards distant. Sheep and goats often make a resting place on the altars of small country shrines that are theoretically still in use. NELSON ANNANDALE.

"During my sojourn in Trang, one of the Siamese provinces on the west coast of the Malay Peninsula, clay images, which I recognised to be of Hindu origin, were shown me by natives, and later I found an opportunity to visit Ban Hui Yot, a village about thirty-two miles north of Trang, the capital of the province, and about six west of the limestone cave in which the images had been discovered. The entrance to this is situated in thick jungle in the face of a rock called Kao Wat Han, which is hardly taller than the surrounding trees. I found that most of the natives had never penetrated into the interior for fear of *pi*, or spirits, though they had seen heaps of broken images outside.

"An open dome-like cavity forms the entrance to the inner chambers of the cave, being closed by a low breastwork of bricks with a narrow doorway scarcely three feet high. On the left there is a gigantic statue of Buddha attaining *Nirvana*, with his disciples in attendance round his couch. A raised platform on the right is occupied by several more or less antique bronze statues; a large quantity of smaller images in wood or metal are to be found standing at the foot of the larger figures or partly buried in the ground or in the rocky cavities of the walls. Past the row of buddhas to the right there is a dark recess in which the clay figures are found. Half of the floor of this cavity had been excavated by Chinese pepper planters, who use the deposit of bat-guano as manure. When digging guano they work right down to the rock and afterwards remove stones and the like by sifting the guano through coarse baskets. This explains the broken images at the entrance to the cave. Half of the floor of the cavity, however, was as yet undisturbed, and here the smooth surface of the deposit gave no indication of anything underneath, although the loose soil that had been exposed by digging consisted almost entirely of fragments of clay images. The more perfect specimens were found lying layer upon layer to a depth of almost two feet, one touching the other. Originally there must have been many thousands of them. Having been covered for a long period by guano, and having become saturated with its moisture, they were very soft and fragile, and in some cases the deposit showed greater cohesion than the images. Out of over a

hundred specimens that were dug up I only succeeded in getting about two dozen in a fairly perfect condition.

"In this cave there were three different kinds of images, each kind placed by itself." [There is at least one other type (Fig. 4), but there are only two specimens in the Oxford collection, and both are very much obliterated.—N. A.] "The largest kind (Figs. 1, 2), which was about the size of a small human hand, was generally found in pairs, face to face, as shown in (Fig. 1), and was thus better preserved than the others. The images, or rather tablets, were made of oblong lumps of clay flatted and drawn out to a point at one end, so as to be pear-shaped. They had been worked by hand, as is proved by the finger-marks still clearly visible upon the backs and sides. The material is rather coarse and gritty, but broken specimens show that a finer substance has been spread over the surface, doubtless to ensure sharper outline in the figures, which have been produced by pressure upon the inner side of the tablets. A wooden mould could not have produced the minute detail that some of the figures exhibit, and probably a metal die was used. The largest tablets show nine figures in an attitude similar to that in which Buddha is usually represented at the present day; the other types are purely Hindu. They represent a seated figure with an elaborate head-dress or halo; or a twelve-armed deity holding a captive on either side.

"All these tablets have stamped upon their back inscriptions in some Indian language." [Mr. Wichreme Singhe, of the Indian Institute, Oxford, who has only had time to make a cursory examination of the plaques, gives the following information concerning them. All the inscriptions are in the Nāgarī characters, and probably consist of the Buddhist creed, "*Ye dhamā betuppabhavā*," &c.* They are not earlier than the tenth century. Numbers of votive offerings of this kind have been found in India and Ceylon.—N. A.]

"The current idea of the Siamese that these images, which they call Pra Pitàm (corrupted from Pra Pī tam, "Idols made by spirits"), are of supernatural origin is not so absurd as it seems, for when first removed they are of a dark yellowish colour, as if they had just left the maker's hands. On being exposed to the air they soon become harder and assume a paler colour. As they are evenly distributed and constantly met with in the places where they are to be found, the Siamese are convinced that, however many are taken away, an equal number will replace them, and that those which are taken will return of themselves to the cave." [Somewhat similar images, but on rectangular tablets, and of purely Buddhist design, are found in the limestone caves of Jalor and Pahang, and are there attributed by the Malays to the *Hantu Parai* or Peris, whom they regard as spirits of the crags. An intelligent Siamese nobleman, who was well acquainted with the East Coast Malay States, informed me that the tablets were undoubtedly deposited in the caves by the Siamese armies who invaded the Malay Peninsula in the eighteenth and the beginning of the nineteenth century, and who made them as votive offerings, because they were afraid of being surprised by the Malays. In Jalor the Malays believe that those on which figures holding their hands in front of their faces are stamped render their finders invulnerable if worn on the person. I have not seen specimens of this type. Inscriptions are said to have been noted on some specimens, but I have not myself been able to find any that were not almost entirely defaced.—N. A.]

"Some time after visiting Kao Wat Han, I visited another cave in a mountain called Kao Sai, west of the Trang river. Here I found images of a different kind (Figs. 9, 10, 11), with an inscription surrounding the upper part of a single figure and without stamps on the back of the tablets. The face of the tablets is sunk very deep, and the

* The formula is an abbreviation of that on the Wat Han figures. Mr. Singhe believes them to be synchronous.—N. A.

figure, which stands out boldly, is not so high as the edges. The design and execution are superior to those of the Hui Yot figures." [The greater sharpness of some of the Kao Sai figures is only due in part to the fact that they have been protected from rubbing against the backs of other tablets. Their attitude is that in which modern Siamese buddhas are represented, but they have each four arms, and their features are Indian. They have not all been made with the same stamp.—N. A.]

"These figures were found mostly in a small inner cavern approached by a low and narrow passage from a larger cave, which was dark, and did not contain Buddhist statues. It had been one of the first worked for guano, and so the few figures that remained in the larger compartment were broken, the majority having been reduced to small fragments. Those in the inner chamber were more perfect, though they had been thrown down in heaps, apparently in great haste, and many of them were broken. I succeeded in getting about fifty specimens, together with a small cooking-pot that was found among the *débris*. The shape of the latter is unmistakeably Indian, and I have never seen examples of antique or modern Siamese or Malay pottery of a material so coarse. Even to the naked eye it seems to consist principally of tiny pebbles." [The first part of this statement is rather bold. I agree with Mr. Steffen, that this pot differs in shape, ornamentation, and material from modern Malay and Siamese pottery, but the material is only a very little more coarse than that of a handmade pot which I collected, fresh from the workman, in the state of Nawngchik, near the East Coast.—N. A.]

"The Malays on the coast occasionally dig up jugs, dishes, and basins, which in shape and material scarcely admit of any doubt as to their being Indian antiques, resembling the remnants of pottery occasionally found by me in the caves of the interior." [From Mr. Steffen's verbal description, I cannot help thinking that some of these dishes found on the coast must be either Chinese or Cambodian.—N. A.] "In the interior of Trang I found a short stone pillar that carried some animal on the top and was recognisable, even in its mutilated state, as a fair representation of the pillars near temples in India. In the north-west part of the province, near a fairly large lake called Talèh Song Hong, or 'Lake of the Two Chambers,' there are still, on the banks of a small river, heaps of large bricks overgrown with vegetation. Neither Malays or Siamese are known ever to have used bricks of a similar shape, but they are common in Indian buildings. On the mountain range Kao Chawaprabh, which separates Trang on the east side from Lakon on the west, and is at present very difficult of access, tin has been worked at some period in such an efficient manner and on so great a scale that the workings must have been made by thoroughly experienced miners. This fact points again to India.

"In Lakon, again, we do not depend on possible or even probable suppositions. Siamese history, verified by undeniable proofs, mentions some Indian race as having invaded Lakon from the west, and the traditions of the descendants of these people, still living on the east coast, will have it that Trang was where their ancestors landed." [Until recently there appear to have been families in Trang itself who claimed descent from *Pram* or Brahmins. There are still several *Pram* villages in the adjacent state of Patalung, and the *Prams* are said to have a temple at Lakon. The *Prams* of Siam are a religious caste, professing Buddhism and regarded as sacred by all classes. In Patalung and at Bangkok they take a leading part in all important religious ceremonies. Their Indian blood, if it ever existed, has become so diluted by constant marriage with Siamese women that it would probably be impossible to diagnose it by physical characters. I believe that they even allow adoption into their caste.—N. A.]

"To conclude, I will give a free translation of the facts as mentioned in the old palm-leaf scriptures of the Siamese:—'In the year 687 of the *Maha*, or "Great" era ' (A.D. 765), great political disturbances took place all over India, and the inhabitants ' finding it impossible to make a living, were forced in large numbers to leave their

'home and country and settle amongst other nations. . . . At that time four tribes 'of Brahmins, consisting of a considerable number of persons, made their way eastwards 'from "Wanilara" to Burma, Pegu (then independent), the Laos States, Siam and 'Cambodja. Those coming to Siam went partly to the north-west and settled in 'Sukotairajatani and Lawò (the present Lopburi), others went from Pegu to Tana-'wassi (Tenasserim) and across to Pechaburi, and still others came to Lakon (at that 'time called Sai Pet or Kai Pet), where they built a temple and erected their *sao ching* '*cha* or posts for the swinging ceremony. These pillars still exist in the town as 'a proof that the Brahmins came to Lakon before they reached Bangkok.' As to there being no descendants of these Indians in Lakon: 'In the year 1130 of the '*Chula* era (A.D. 1766), Phya Tak usurped the throne of Siam and founded a new 'capital, calling it Tanaburi Sri Ajuthaja.' (Part of the present city of Bangkok on the west bank of the Menam occupies the site of this capital.) 'He then collected an 'army and went to war against Lakon. The country was vanquished and the inhabi-'tants taken to Tanaburi in the year 1131 (A.D. 1769).'

"It may be supposed that a certain number of the inhabitants made their escape."

A. STEFFEN.

India: Gypsies. **Risley: Sinclair.**

The Origin of the Gypsies. *Extracts from Correspondence relating to the Origin of the Gypsies, communicated by H. H. Risley, C.I.E., Census Commissioner for India.* D.O., No. 627. **126**

A.—*Extracts from a semi-official letter from Mr. A. T. Sinclair, of Boston, U.S.A., to His Excellency Lord Curzon of Kedleston, dated 21st July* 1902.

* * * * * * *

Para 5.—Baluchistan gypsies are called Lúrí. Their numbers are uncertain, perhaps 1,000 or 2,000. . . . . .

* * * * * * *

7. India.—A large number of Europeans and natives, scholars, officials, merchants, tradesmen, &c., who have lived in India many years, or were born there, all write or tell me they never saw a *single gypsy* in India. So many Englishmen there have been interested in this question, and nobody yet has found there even *one* gypsy. There are many tribes, gypsy-like in their habits, trades, and tricks, but their languages are all either the vernacular of the district where they roam or whence they come, a kind of thieves' jargon, but never gypsy. Curiously, when their dialect varies from the vernacular, it always seems to differ from gypsies' more than that does. Dr. Grierson, who has been of much service to me, put the thing admirably (and he is a gypsiologist himself): "There are numbers of so-called gypsy tribes in India. The best known are "the Doms (whose language is not gypsy). Most of the other 'Indian gypsy' "dialects are not languages at all, but are perversions of other well-known Indian "languages, much as 'thieves' Latin' is a perversion of English."

8. We have, then, 500,000 gypsies in Old European Turkey speaking a pure gypsy tongue in words and grammar. Between that and India thousands of gypsies, their language growing more corrupt, until on the confines of India it is nearly gone. Still, everywhere, everybody, Vambéry, General Ivanhov, General Aminoff, Major Sykes, and hundreds of others, at once recognise them as gypsies just as you do a gypsy in England. As soon as we cross into India nobody can find a gypsy. . . .

* * * * * * *

10. As to how you can aid me:—

(*a*.) I should like your own views on the gypsy question as to origin and any suggestions about it. I should value them as the judgment of a scholar who has investigated similar questions with enthusiasm, vigour, and success. It will not do to

trust entirely to language, history, ethnology; the whole situation must be considered with good judgment and strong common sense.

(*b.*) I desire facts to link up to the Central Asian Luli and Baluchi Luri.

(*c.*) Do these wander into India? Do Indian gypsy-like tribes roam abroad? I know Afghan horse-dealers come down even to Southern India. Are they gypsies?

(*d.*) Is there any trace in India particularly on the border in the Punjab of these Luli or Luri? Or any tribes there that can be identified with them?

(*e.*) We find all about the north-western adjoining countries this distinct gypsy race. It seems as if there must be the same race across in India. If not, this is a most important fact.

(*f.*) Of course I cannot expect you yourself to devote time to such a matter. I know you will be interested and so have written at length to explain myself fully. You, however, know who in India will be interested in such matters, and those most competent to consider them. I realise fully the difficulties of the subject, and all investigations of the kind, particularly in the East. Time, tact, the happy faculty of getting at things right, an interest in such subjects; all are necessary. In requesting favours of this kind I often hesitate, but I have received so much courtesy and unlimited kindness everywhere, I felt compelled to write you after reading your *Persia*. Northern India is a vital spot to unravel the gypsy riddle. It can be done only by those there on the ground.

All I can expect of you is to hand my letters to the one who in your judgment will be most competent to consider the matter. Of course, I cannot expect any one to spend time on the matter except at their entire convenience, and as an interest in a scientific question will lead them. Your suggestions to them I also should value highly.

Simla, 28th August 1902.

B.—*To A. T. Sinclair, Esq.*

D.O.I., No. 596.—MY DEAR SIR,—I am desired by the Viceroy to reply to your interesting letter of the 21st July, addressed to his Excellency, on the subject of the gypsy question.

2. The problem of the connection of India with the people usually known as gypsies in Europe can, I venture to think, be approached by two methods—by philology and by ethnography, or anthropology. We are in a position in India to apply both of these on a large scale and in a systematic fashion.

3. The Linguistic Survey has, I understand, collected a large number of specimens of gypsy dialects, but this material has not yet been digested, and Dr. Grierson writes to me that he is unable to say as yet what is the real basis of each. Some are simply thieves' patters, made up by altering the order of the letters in good Hindi words. Dr. Grierson is, as you mention, a keen student of the gypsy question, and he will no doubt bring out interesting results when he has completed his analysis of the material.

4. The Ethnographic Survey of India, which is now being undertaken, can work two lines of enquiry. It can record customs, religion, folk-lore, traditions, &c., and it can measure heads and determine physical characters. If you or any other specialists in gypsy ethnography will let me know what particular points you wish to have enquired into I will add them to the *Manual of Ethnography* already in circulation, of which I enclose a copy, and will direct special attention to them. In case you should not have seen the papers relating to the survey, which was sanctioned by Lord Curzon last year, I send you a set for reference. I can also have measurements taken of Bedias, Doms, Kanjars, Nats, &c. This is easily done, as there are always plenty of them in gaol. It is just possible that the examination of tattoo marks, which I started last year, may throw some light on the affinities of Indian and European gypsies. A reference to my article, No. 74 in the July number of MAN [1902], dealing with the tattoo marks of the Doms,

who are supposed to be the original gypsies, will show that this notion is not so fanciful as it seems to be at first sight. People are surprisingly conservative in the matter of patterns of all kinds, whether of tattoos, or shawls, and carpets.

5. I do not quite follow what you say about there being no gypsies in India. In a note on the languages of India, which will eventually be published as the language chapter of the Indian Census Report, Mr. Grierson says that in its grammar Romany "presents many remarkable points of similarity with the languages of the outer circle," Kashmiri, Sindhi, Marathi, Bihari, &c. And it is, I believe, settled doctrine among philologists that grammatical structure, and not vocabulary, is the test of linguistic affinity. The evidence of language, therefore, so far as it goes, tends to show that the ancestors of the European gypsies were Indians. But in India the gypsy people have no generic name. They are Doms, Nats, Bedias, &c., and are lost in the crowd of castes and tribes which make up the population of India. "Dom," by the way, is probably a tribal name of the same type as Kol, Ho, &c., meaning "man." In Europe the gypsies are practically still a caste, intermarrying mainly among themselves, living in a peculiar fashion, and bearing a specific name, derived, I believe, from the account some branches of them gave of themselves as coming from "Little Egypt"—according to Professor Hopf, the Peloponnesus. There is therefore no difficulty in distinguishing them from the rest of the population, while in India there are at least a dozen castes who live a more or less gypsy life, and may be described in popular phraseology as gypsies. If our inquiries are to proceed on systematic lines it will be necessary for gypsiologists to explain exactly what they mean when they speak of gypsies in India. To be more precise, we must know by what tests, ethnographic or anthropometric, the gypsies are to be distinguished from other more or less nomadic tribes who wander about in search of pasture, in pursuit of trade, or as carriers of other people's goods.

6. I do not find much evidence in the census reports of the presence of Luris or Lulis (paragraphs 5 and 10, *b*, *c*, and *d* of your letter) in India. There is an Afghan or Pathan tribe called Luni, numbering 2,600 in Baluchistan and 240 in the Punjab, but they call themselves Durrani, they have the standard Afghan genealogy, and it is not suggested that they are in any sense gypsies. Among the Brahuis again we find Loris or blacksmiths, who, according to Mr. Hughes-Buller, Superintendent of Census, Baluchistan, "are looked upon as a subject race with whom no self-respecting tribesmen "will intermix." But the Loris are supposed to be Jats, and are so spoken of by the Brahuis, and it seems more likely that their name is connected with loha, "iron," than that they are immigrant gypsies from Persia. It is not clear to me whether you would connect these Lulis and Luris with the Lurs described in his Excellency Lord Curzon's book on Persia, but I gather that the Lurs are only seasonal nomads within the limits of their own hills, which are a very long way from Baluchistan, and that they have no gypsy proclivities.—Yours sincerely, H. H. RISLEY, Census Commissioner and Director of Ethnography for India.

Japan: Religion.

Aston.

Kæmpfer as an Authority on Shinto.

By W. G. Aston, C.M.G.

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As Kæmpfer's *History of Japan* is to this day quoted freely as an authority on Japanese religion by our most eminent anthropologists, it may be useful to examine briefly how far this well-known work is deserving of reliance.

The author's stay in Japan lasted for two years and two months only. He lived in the Dutch Settlement at Nagasaki in a sort of captivity, varied by two journeys to Yedo in the suite of the chief of the Dutch factory. The Japanese authorities took every possible means of preventing intercourse between the Dutch residents and the inhabitants of Nagasaki, and Kæmpfer had to obtain his information partly from the native interpreters, but chiefly from a young man who was appointed to wait on him as

his servant and at the same time to be instructed in physic and surgery. He was wholly ignorant of the Japanese language.

It is not surprising that under these circumstances his knowledge of the difficult subject of the Shinto religion was defective. Truth to say, his ignorance is colossal. To give a few examples:—

He defines Shinto as idol-worship, an aspersion which has the slenderest foundation in fact, and speaks of a (non-existent) idol of *Tenshōdaijin* (the Sun-goddess).

He thinks that this deity, the principal one of the Shinto Pantheon, is of the male sex, and has no suspicion that she is identical with the sun. What weight of authority should we allow to a writer on Greek mythology who made Phœbus a female, and knew nothing of any connection between him and the sun? Kæmpfer had before him her other name, *Ama teru no Oön gami* (Heaven-shining-great-august-deity), which he renders "a great spirit streaming out celestial rays"; but even this did not excite his suspicions, for he speaks of Ise as the province where "he" reigned, and gives the number of years during which "he" occupied the throne.

Sin and *Kami* (God) signify, according to Kæmpfer, "souls and spirits." The use of these words is very misleading. The *Kami* are not spirits, though they may have *mitama* (spirit, effluence, shekineh) which occupy their temples and manifest their presence on occasion.

Tenjin, a deified statesman of the eighth century, and *Hachiman*, a deified Mikado, are described by Kæmpfer as brothers of *Tenshōdaijin* (the Sun-goddess). The old myths lend no countenance to this statement.

He calls *Yebisu* the Japanese Neptune, and *Inari* "the Great God of Foxes," and says that the *Gohei* are white bits of paper emblematic of purity. All this is incorrect.

Kæmpfer recognises two classes of Shinto deities. One consists of deified men. Of the other he quotes only a few names, knowing nothing of their character and functions, not even the fact that they are nature-deities. The general impression left by his observations is that the leading feature of Shinto is hero-worship, ancestor-worship, or whatever else the cult of the dead may be called. He is probably responsible for Grant Allen's statement that Shinto is based entirely on ancestor-worship. The real state of the case may be gathered from the following analysis of a list of "Greater Shrines" prepared in the ninth century. Of the gods comprised in it, seventeen are nature-deities, one is a sword which probably represented a nature-deity, two are more or less legendary deceased Mikados, one is the deified type and supposed ancestor of a hereditary priestly corporation, one is the ancestor of an empress, and one a deceased statesman. A similar list compiled from more ancient sources would show a still greater proportion of nature-deities.

Mr. J. G. Frazer in his admirable work, *The Golden Bough* (I. 234), quotes from Kæmpfer a long passage descriptive of the personal cult of living Mikados. I am unable at present to examine his statements in detail. They seem to me to consist of a good deal of ignorant gossip mixed with, perhaps, a few grains of truth. It is in any case impossible to accept Kæmpfer's authority for them. His woeful blundering in Shinto matters deprives him of all claim to our credence, and what knowledge of the domestic arrangements of Windsor Castle could we expect from a Japanese who had lived two years in semi-captivity at Galway, prevented from intercourse with the inhabitants and entirely ignorant of the English language?

Siebold's *Nippon Archif* is, in so far as Shinto is concerned, a vast improvement on Kæmpfer. Nevertheless, the student of anthropology and religion cannot be too emphatically warned that his only safe rule is to disregard everything that has been written on Shinto by Europeans before Sir Ernest Satow's accurate and scholarly contributions to the Japan Asiatic Society's transactions in 1874–1881. He is the founder of our knowledge of Shinto. Since then the *Kojiki* and *Nihongi*, which contain the

old mythical lore of Japan, have been translated into English, while an important addition to our knowledge of the ceremonial has been recently made by Dr. Florenz's continuation of Sir Ernest Satow's *Ancient Japanese Rituals* in the Japan Asiatic Society's Transactions for 1899. With these materials available it is surely inexpedient for writers in this country to go on quoting so antiquated and so essentially worthless an authority as Kæmpfer's *History of Japan*. W. G. ASTON.

New Zealand. Hamilton.

Note on a Small Stone Relic found near Orepuki, Southland, New Zealand. *By A. Hamilton, Local Correspondent of the Anthropological Institute.* **128**

The specimen described in this note was found near Orepuki, a small township on the shore of Foveaux Strait, in the extreme south of New Zealand. In this neighbourhood there are still a small number of the original Maori population of the South Island who reside at Colac Bay and one or two other places.

Just opposite at the western entrance to the strait is the island of Rarotoka or Rarotonga, which tradition states was named after a Rarotonga of the olden time far away in the Pacific. The island has always been regarded as a sacred island, and from time to time the wind uncovers rare and curious specimens on the sites of old settlements. Some of these will be alluded to later. The present European name for the island is Centre Island. It is in the neighbourhood of this sacred isle that the specimen now under consideration was found. It belongs to Mr. Dunlop, the manager of the Orepuki Shale Oil Works, and I am obliged to him for the loan of it.

FIG. 1.—SMALL STONE RELIC FOUND NEAR OREPUKI. (*Front and back view.*)

As will be seen from the figures, it is shaped like the handle and guard of a small sword or dagger. It is elaborately carved from a dark-coloured phyllite, and, unfortunately, has been much damaged, a large fragment having been split off from each side. Fortunately, however, the portions destroyed can be reproduced in nearly every case by a study of both sides, and the full design reconstructed (Fig. 2).

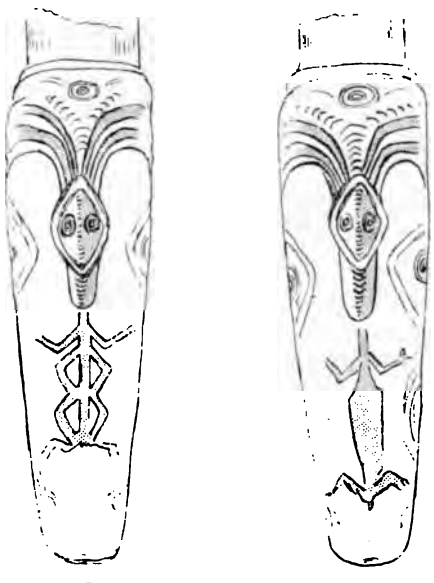
It is too small to be used as a dagger or weapon, though the shape and broken fragment where the blade should be suggest this at once. The length altogether is a little more than 3½ inches (9·25 cm. by 1·60 in width). The cross-hilt is recurved with a fine sweep boldly executed. The process of manufacture is indicated by the marks of the drill on the inner curve of the arms, and there is a large hole bored near the butt, which has evidently been worked with a loose Polynesian drill, somewhat unsteady in its action. Beyond the cross-piece is a fragment of a shaft, circular in section, 20 mm. in diameter. It is, of course, impossible to say what length it was originally, or whether it tapered. There is no indication of tapering in the fragment remaining. Curious as the shape is, the ornamentation with which it is covered is still more interesting. The design is formed by cutting out portions of the surface so as to leave the lines in low relief. The main design is best seen by placing the large hole at the top. Round the margin of the hole is a line which projects vertically at the top, and passing over, probably, met the corresponding line on the other side. Outside this first line is another, which forms lower down the outline of a large lozenge-shaped or kite-shaped face. The inner line is notched at short intervals all round. I take these two lines to represent the framework of a feather head-dress such as are common in the Pacific. There is a line parallel with these on the outside, but the termination on each side is so damaged that I am uncertain as to what it represents. The lines bounding the area of the face are incomplete on both sides, but, judging by the small perfect maskoid on one of the curves, it came to a point, but that no mouth was indicated. The eyes are represented by concentric circles, two on one side, three on the other. The larger space seems to be the only reason for one having three rings. Below the face the lines are somewhat difficult to follow, but on one side it appears to be plain that the upper lines on each side are intended for arms, as there is a distinct indication of an elbow, and I take the two lower lines to be meant for legs.

FIG. 2.—RECONSTRUCTED DESIGN OF STONE RELIC FOUND AT OREPUKI.

The edge of the curve on the inner side is ornamented with closely-placed notches, and also the angle above and below the maskoids. The arms and legs terminate at these kite-shaped maskoids, which have the eyes represented by concentric circles; no mouths, but they are angled on the centre line and notched from top to bottom. In relation to the arms of the two figures just described the maskoids appear to be upside down, but when we examine the handle at each side, as seen in Fig. 3 below, we find a small full-length figure so placed that the small mark on the curved arms become the heads of these small figures by superposition.

As will be seen from the figures, one figure represents a male drawn in a very peculiar and archaic style. On the opposite side is a female figure even more peculiar.

The extreme butt or end has been ornamented, but the small fragment which remains does not give sufficient to justify a restoration. I think, however, that there were two small figures with their heads towards the central part of the end. The expanded triangular areas at the base of the shaft are ornamented with concentric circles and notches. The whole represents great labour and was doubtless a sacred or highly valued possession. Its small size precludes the idea of its having been used as a weapon, and I have looked in vain for a similar object in the drawings of the Edge-Partington Album and other works.



♀ FIG. 3. ♂
SIDE VIEWS OF RELIC FOUND AT OREPUKI.

The only possible resemblance that I can find is to the fan handles made of whale-tooth ivory figured at Plate 25 and Plate 47, Fig. 6, of the Edge-Partington Album, as being fan handles from the Marquesas. Here we have the central shaft, the human figures at the sides, and the curved anchor-like arms with heads at the middle of the arms, *only the reversed way*. The head-dress, with the projecting spike for a feather plume, is seen on the head of a figure on a dancing stick from New Britain. (Plate 245, Fig. 2.)

I must call attention to the notched character of the subsidiary ornamentation, which corresponds exactly to the markings in the specimen figured in my *Maori Art* (Plate 56, Figs. 1, 4, 5, 6), and which I there state to have a special character and significance of their own. The specimen figured on Plate 48 of *Maori Art* (Fig. 5) came from the same locality as the one under discussion and has a similar type of face. The small object figured in the same plate in Fig. 3 is slightly notched along the ridge and may have represented a small maskoid.

It is needless for me to remark that the Maori were not a fan-using people, nor do I know at present of any mention of fans in their songs, &c. No doubt they would fan themselves when hot and tired, but they did not develop the fan, as happened in many of the more tropical islands. If, then, this was a fan handle, it was probably an old ceremonial specimen brought in one of the old *hekes* as a sacred relic from another land.

A. HAMILTON.

REVIEWS.

Physical Anthropology. Schwalbe.

I. *Der Neanderthalschädel.* Von G. Schwalbe, in Strassburg, I.E. Sonderabdrück aus 'Bonner Jahrbücher." Heft 106. **129**

II. *Die Neanderthalrasse.* Emil Schmidt. Globus. Bd. LXXX., No. 14. 10th October 1901.

III. *Neanderthalschädel und Friesenschädel.* Von G. Schwalbe, in Strassburg. Globus. Bd. LXXXI., No. 11. 20th March 1902.

In these three essays, the subject of consideration is the fossil skeleton of the Neanderthal, viewed in the fresh light recently thrown upon its anatomical characters by the exhaustive work of Professor Schwalbe of Strasburg. In the first paper are set forth the methods adopted and the results obtained from these. The second paper consists of a brief account of Schwalbe's work by Dr. Schmidt; and in the third

essay Schwalbe controverts Virchow's recent pronouncement on the nature of the Neanderthal skeleton, and explains the grounds for his inability to accept Virchow's conclusion.

Returning to the first-mentioned paper, it will be found to consist of an elaborate investigation of the several bones of the famous skeleton which is now to be seen in the Rheinische-Antiquitäts Museum at Bonn. The most important results of this new enquiry are that the evidence for the view which ascribes the peculiar features of the skeleton to pathological causes must be deemed insufficient, and that the skull in particular (the limb bones have been investigated separately by Professor Klaatsch) presents so many features which ally it to the skulls of Pithecanthropus erectus and of apes, that the Neanderthal man must be considered to belong to a species different from any variety or race of men now known. Indeed, the conclusion that the Neanderthal variety is so distinct as to justify its description as a separate species is the essential point now demonstrated.

The methods employed by Schwalbe deserve a word of mention. It is to be noticed that almost without exception, the measurements selected with a view to the comparison of different specimens are applicable with perfect exactitude to the crania of apes as well as those of human beings. Several of these measurements and the indices derived from them were used by Schwalbe in his exhaustive examination of the calvaria of Pithecanthropus erectus (cf. *Zeitschrift für Anthropologie und Morphologie*, Bd. I.). An important point of comparison depends on the proportions which exist between the lengths of the several margins of the parietal bone of various primate mammals. In respect of the great proportionate length of the temporal margin of the parietal bone, the Neanderthal skull is found to be more closely allied to the apes (anthropoid and other) than it is to any human race now existing. At the same time the Neanderthal skull escapes a complete correspondence with those lower forms by reason of the associated length of the coronal margin of the same bone.

With the remark that a carefully elaborated method used by Dubois was applied to a new determination of the probable cranial capacity of the Neanderthal skull, the subject of methods must be passed over. An important point, brought out into prominence by the work under consideration, is the stress to be laid on observations from a single specimen as affording ground for a general statement or description of the species to which the individual belonged. The point upon which Schwalbe insists is that when a single specimen presents feature after feature approximating it to the higher apes rather than to man, there is justification for such separation of the specimen as is involved in assigning it to a separate species. This brings up the consideration of the exact term to be employed in describing the zoological group to which the Neanderthal skull is to be relegated; and it must be admitted that Schwalbe does not quite clearly or consistently state whether it is as a new genus, or as a new species merely, that he would describe the specimen (cf. p. 57). What is clear, however, is, as has been already said, that the anomalies of the skull place it far outside the range of normal modern human crania, and assign to it a place distinctly nearer Pithecanthropus and the anthropoid apes than to these. Consequently, Schwalbe suggests that the name Pithecanthropus should be applied to the zoological group to which the Neanderthal man belonged, and he is thereby constrained to employ the term Homo pithecanthropus to describe the new species. This entails a change of name in the case of the Javan fossil (discovered by Dubois) from Pithecanthropus to Anthropopithecus, and as the latter name has to be wrested from the Chimpanzees, Schwalbe suggests the re-employment of the name Troglodytes for these. Such a wholesale shuffling of names appears, however, quite inexpedient at the present time, and the best term descriptive of the new species would seem to be Homo neanderthalensis. A scheme of the very varying opinions expressed on the subject is given by Schwalbe on pp. 56 and 57 of his work.

The second essay is, as has been said, a carefully and clearly written account of the foregoing publication.

In the third paper under consideration, Schwalbe takes up the address recently delivered by Virchow at Metz, on the occasion of the annual meeting of the German Anthropological Society in that city. Virchow reiterated his opinion that the peculiar features of the Neanderthal skull do not exclude it from association in the same species with other human beings. Schwalbe examines Virchow's arguments most critically, and is able to point out that even this great authority had not taken the opportunity of informing himself correctly on the subject of various anatomical points on which stress was laid. Thus Schwalbe refutes, with apparent success, Virchow's contention that pathological causes can be invoked to explain the extraordinary combination of anomalies in the Neanderthal skull. He then discusses again the question of the value of the differences between the Neanderthal and other human crania, in so far as they may justify separation to the extent of a genus or a species only, and, as already stated, concludes that the differences have a specific value. Finally, comes the most important part of this third paper, viz., the demonstration that several skulls claimed as "neanderthaloid," notably certain Frisian skulls thought by Virchow to be modern representatives of the Neanderthal type, do not stand the test of a minute examination, and are only superficially allied in appearance to the type specimen.

It should be finally mentioned that the question of the geological age of the strata in which the Neanderthal skeleton was discovered has been further investigated by Koenen, with the result that their antiquity is now considered as very considerable as regards the occurrence of human remains, it having been suggested that the formation is a tertiary one (*see* No. I., p. 63, *Nachtrag*).

The foregoing essays and the questions incidentally discussed give rise to the following reflections amongst others: In the first place, as concerns the character of the work, one is impressed by the precision and accuracy of the methods employed, with consequent freedom from ambiguity in the indications obtained. As one result, among many, it is very clearly shown that in craniology, as in other matters, things are occasionally not what they seem; and that the claim of such skulls as that from Borreby, that of Kai-Lykke, &c., to a resemblance with the Neanderthal skull, rests on the slender basis of an outward similarity in the common possession of a retreating forehead, a basis which will not stand the test of a searching examination. The net result of the work of Dubois on the calvaria of Pithecanthropus erectus, work which was the precursor in point of time, which anticipated in principle this later work of Schwalbe, and which must be associated with it, is a great gain to physical anthropology in respect of precision of method.

Secondly and lastly, one cannot avoid a special reference to the work of the eminent anthropologist so lately deceased, Professor Virchow. Keenly interested in physical anthropology, Professor Virchow had investigated the Neanderthal skeleton more than thirty years ago. The difference of opinion as to the nature of the Neanderthal man seems to emphasize the whole difference which of late years placed Virchow with a limited following, in contrast with, if not in opposition to, the majority of anthropologists in Germany. To me, Virchow's position appears to have been essentially that of an agnostic with regard to the origin of species in general and of man in particular. The reason for his extreme caution in this matter could only be furnished by one intimately acquainted with Virchow's character and trend of mind. But it has had as its result, that Virchow's contributions to physical anthropology have been made rather through the pupils he has inspired than by his own work. Descriptions he has left us in immense quantity, but for so vast an amount of labour there is peculiarly little outcome in the way of the conception, formulation, or corroboration of a general theory of the relation of man to other animals or the inter-relationships of various human races. The

work of Schwalbe differs essentially from that of Virchow in that through it all runs a spirit of confidence in the guiding principle of evolution of form. One cannot but feel that the satisfaction experienced in reading such work is due to the stability conferred by the presence of such confidence, while at the same time, the several results present such concordance that one's reliance on the trustworthiness of the principle is proportionately enhanced. W. LAURENCE H. DUCKWORTH.

New Guinea. **Schmidt.**

The Languages of North-East New Guinea.

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1. *Ein Beitrag zur Kenntniss der Valman-Sprache;* auf Grund der von P. Vormann, S.V.D. gemachten Aufzeichnungen, bearbeitet von P. W. Schmidt, S.V.D. Zeitschrift für Ethnologie. Berlin, 1900. pp. 87–104.

2. *Beiträge zur Kenntniss der Valman-Sprache.* A. *Texte* von P. N. Spölgen, S.V.D. B. *Beiträge zur Grammatik* von P. W. Schmidt, S.V.D. (Wiener Zeitschrift für die Kunde des Morgenlandes. Bd. XV. 1901. pp. 335–366.)

These two papers refer to the language spoken by the natives of Berlinhafen on the north coast of Kaiser-Wilhelmsland. The Valman, called Leming by their neighbours, are the occupants of the coast of the mainland. On the neighbouring islands of Tumleo (Tamara), Saliu (Saleo), and Ali a different language is spoken. The first paper consists of a notice by P. W. Schmidt of the Valman language, based on the notes of P. Vormann, a missionary of the Societas Verbi Dei at Berlinhafen. The second is a series of descriptions of scenes and occupations collected by P. Spölgen, the successor of P. Vorman. From these P. Schmidt has extended and corrected his former notice. Together they form a most valuable contribution to our knowledge of the linguistics of this part of New Guinea, a subject which Professor Schmidt is making peculiarly his own.

The Valman language belongs to that division of the New Guinea languages for which the present writer in the *Journal of the Anthropological Institute* for 1895 suggested the term Papuan: that is to say, it entirely differs in structure from the languages of the Melanesian Islands and has a distinct vocabulary. With the Kai (or Katedong) language at Finschhafen, and the Bogadjim of Astrolabe Bay, it shows that the languages of German New Guinea exhibit the same phenomena as those of the British region, the islands and some districts on the coast using Melanesian forms of speech, whilst in the greater part of the region, and especially inland, non-Melanesian languages are found.

On the island of Tumleo, opposite the Valman district, a Melanesian language is spoken, and from this the Valman has borrowed a few words, but otherwise the Melanesian has had no influence. The words borrowed from Tumleo are such as we might expect a non-seafaring people to borrow from islanders. Examples are: *vago*, boat (Tumleo, *vaka*); *vul*, pig (Tumleo, *pul*); *vesi*, oar (Tumleo, *vesi*); *sam*, outrigger (Tumleo, *suam*). These are the common Melanesian words: *vaka*, *polo*, *vose* and *sama*.

With regard to grammar it is not clear whether the noun, as in some of the Papuan languages of British New Guinea, is declined by suffixes. Prepositions are not used and postpositions indicate the relationship of things, as *nagol-peni*, house-in, *ńupol raninke*, tree-round. The genitive case is only indicated by position. If denoting possession it precedes the governing word, but if qualifying, follows; *ńupol mäten* (tree fruit), tree's fruit, *vul ńotu* (water coconut), coconut water. The nominative precedes, the accusative follows, the verb; but neither have any distinctive form.

The possessive of pronouns is shown by affixing the ordinary forms to a stem *vo* (modified to *vu*, *vi*). For the separate personal pronouns *see* examples of verbs:

Sing. 1st Pers. *vŭkúm*: 2. *vĭtí*: 3. (masc.) *rŏnóm*; (fem.) *rŭru*.
Plur. 1. *vŏkíbin*: 2. *rĭtim*: 3. *rĭrí*.

A peculiarity of the language is the expression of gender with some common nouns, with the third person singular of pronouns and with the verbal prefixes. All things of the female sex, or used by females, are of the feminine gender; males and their possessions are masculine. By a wider distinction, sun, moon, night, soul, life, &c., are masculine, whilst rain, boat, fish, sago, hunger, and others are feminine. In Western Torres Strait a somewhat similar distinction is made. There, females and large things take the one pronoun, masculines and small things another. In Murray Island in Eastern Torres Strait things have big and little names. The former being generic, the latter specific.

Number in Valman is indicated by an adjective. Adjectives are sometimes formed (like the possessive pronouns) from nouns by prefix *vo*, and may be used in verbal form.

The verb is shown by a prefix, which varies for number and person. As in the Papuan languages of Kiwai, Torres Strait, and other parts of British New Guinea the grouping is not that of Melanesian particles. The Valman prefixes are:

Sing. 1st Pers. *m*: 2nd and 3rd masculine *n*: 3rd feminine *v*.
Plur. 1st „ *k*: 2nd and 3rd masculine and femine *y*.

Examples are: *kum moro*, I go; *t'i noro*, thou goest; *runon noro*, he goes; *ru voro*, she goes; *kibin koro*, we go; *t'im yoro*, you go; *ri yoro*, they go. These may be compared with the Kiwai (Fly Delta), Mairu (Cloudy Bay), and Murray Island.

Kiwai.	Mairu.	Murray Island.
Mai nogu, I go *Rai rogu*, Thou goest *Noai rogu*, He goes	*Ia aita'a*, I came *Ga aita*, Thou comest *Noa aita*. He comes	*Kaka mari nasmer*, I you see *Mama kari nasmer*, You me see *Kaka abi dasmer*, I him see *Mama abi dasmer*, You him see

The objective pronoun is prefixed to the verb. Tense is generally indicated by prefixes also, but in some few cases by suffixes. The meaning of other verbal forms is not yet accurately known. The numerals as in other Papuan languages have only distinct words for "one" and "two." "One" is *alpan* or *ño* (*ngo*), "two" is *vič*. Other expressions are: *vič-no*, three; *vič-vič*, four; *klago-olun* (hand some), five. The only ordinals indicated are: *vepin*, first; *numon*, in the middle; *kelki*, at the end.

A vocabulary is given in the first notice, and largely augmented in the second. It differs considerably from the Tombenam language (Hatzfeldt) of Zöller's Vocabulary, and shows a language distinct from any others in the region.

As a supplement to this note, and as an illustration of the variety of dialects on the north-east coast of New Guinea, I append a short vocabulary of words used on or near the coast of New Guinea from Berlinhafen to East Cape. These are: 1, Valman, coast at Berlinhafen; 2, Tamara or Tumleo, islands off Berlinhafen; 3, Kaiserin Augusta River; 4, Tombenam, Hatzfeldthafen; 5, Szeak and Bagili, on coast between Hatzfeldthafen and C. Croiselles; 6, Maragum, inland from north coast of Astrolabe Bay; 7, Bilibili, island in Astrolabe Bay; 8, Bogadjim, coast of Astrolabe Bay; 9, Wenke, and 10, Wuong, mountains inland from Bogadjim; 11, Bongu, Constantinhafen; 12, Englam, mountains inland; 13, Kadda, inland east of Kabenau River; 14, Rook Island; 15, Kelana, coast opposite Rook Island; 16, Kelana Kei, inland from Kelana; 17, Pōm, north of Finschhafen; 18, Yabim (Jabim), Finschhafen; 19, Kei, inland from Finschhafen; 20, Tami Island, off Cape Cretin; 21, Bukaua, Cape Cretin; 22, Binandele, Mamba River; 23, Musa River; 24, Oiun and 25, Kiviri, north-west shore

—	1. *Man.*	2. *Woman.*	3. *Sun.*	4. *Moon.*	5. *Star.*	6. *Fire.*	7. *Water.*	8. *Ear.*	9. *Eye.*	10. *Hand.*
1. Valman	konu, konungol	nigi	nganu	sanar	nemetegi	ni	vul	mókul	t'ekûl	vi
2. Tamara	lămamûl	tamin	ŏs	zanar	—	yep	riĕn	tamarapir	—	—
3. K. Augusta River	—	taua	{ yaban, fiie, niö, fiir, uang }	{ namo, moabo }	uiam, tungui	{ um, fiir, yi, fie, fiie }	yo, gu, ob	uan, uabo	{ nou, mĭni mêle, yĭna }	annir
4. Tombenam	moande	nanana	ötem	tau	pop	mun	ak	itschoak	amutak	kambe
5. Szeak, Bugili	tomo	pain	a	kalam	ub	ya	—	kökoted	mătad	neman
6. Maragum	tangom	pinom	kei	tambunam	—	pa	kule	—	—	wai
7. Bilibili	tamol	pain	ahn, and	sinasin	patue	ya	you	tinglahn	malan-patun	liman
8. Bogadjim	tamo	ungasari	zeng	bai	bonenggar	namyuo	ya	dabgala	namgala	bang
9. Wenke	—	nanti	romu	gulerum	bnanger	—	—	gangusam	angigim	gambin
10. Wuong	tuma	gali	keng	karam	burngar	beler	—	dainui	namge	bar
11. Bongu	tamo	keringa	tsch'ng	karam	buain	bia	i, yi	dab	namge	ibon
12. Englam	tamo	genagulum	ulen	saem	uangri, barasi	he	i	olam	namselim	dei
13. Kadda	nomu	bia	hĕme	ăsiko	—	—	—	habena	hamuke	yobo
14. Rook Island	tamtumon	siliwa	daghi	o	pitum	yap	ya	talingăni	matăne	liman
15. Kelana	tamtamon	siliwa	lavanga	keiwo	—	yap	yau	—	—	lemengdap
16. Kelana Kei	mundugil	kunduang	kaiue	koivon	—	gerep	sango	—	—	metessé
17. Pŏm	ni	niga	uĕna	tamane	ăsŏme	da	mĭsa	hĕden	donge	mölen
18. Yabim	namala, lau	palingo	abumtau-oa	abumtau-ayum	ŭti	ya	bu	tanalaun	matanu	lema
19. Kei	ngaka	ngaka	dzoang	măsa	bŏbing	ntso	obo	hăse	tsonge	menonge
20. Tami	damo	diwi	kat	kayo	bĭti	ya	lan	tangelang	matalu	liman
21. Bukaua	namala	lugui	a	ayu	—	ya	bu	danalaun	matanu	lama
22. Binandele	embo, jianda	eutu, gagara	iji	kaliga	dabori	ni	ung	dengoro	disi	ingo
23. Musa River	tamata	—	fefera	—	—	kaivi, ivari	ogo, yuig, ugo	kari	diti	ingo, fake, age
24. Oiun	oroto	taub, babin	uela	sumar	daidia	awarika	arewa	tain	mata	uma
25. Kiviri	oroto	taub, yever	vera	roge	silibot	wairara	sarewa	taina	mata	niwa
26. Raqa	oroto, sabua	ieueri	uela	sumara	damani	wairafa	sarewa	taina	mata	iaro
27. Kubiri	oroto	ieueri	uera	gaiwara	—	wairafa	sarewa	taina	mata	nima
28. Kapikapi	pipia, sebarena	wasike	kao	nawaravi, matau	gwamegwame	kaikarakarata	okoa	taina	mata	nima
29. Dobu	tai, meolotona	waine	sinara	nawarae	kuadima	awe	boasi	tena	mata	nima
30. Boiansi	raua, koroto	wauine	madega	nawaravi	gwamigwami	kai	lokowa	teini	mata	ima
31. Wedau	raua, oroto	wavine	madega	nawaravi	ubona	ai	waira	taniga	mata	nima
32. Taupota	raua, oroto	wavine, inaro	madega	wamahia	kipora	elagi-rogoma	waira	taniga	mata	nima
33. Awalama	rawa, oroto	wawine	madega	wamahia	gamalawo	malau	goila	taniga	mata	ura

NOTE.—y and ñ are substituted for the German j and nj throughout, and affixes are sometimes omitted.

of Collingwood Bay; 26, Raqa and 27, Kubiri, south shore of Collingwood Bay; 28, Kapikapi, Cape Vogel; 29, Dobu, Goulvain Island, between Goodenough and Ferguson Islands; 30, Boianai or Galavi, south coast of Goodenough Bay; 31, Wedau, Bartle Bay; 32, Taupota, east of Bartle Bay; 33, Awalama, Chad's Bay. Of these Nos. 1–21 are spoken in German territory, 22–33 in British. The words of Nos. 1–2. are from P. W. Schmidt; 3–5, 7, 11, 13–21 are from H. Zöller's *Deutsch Neu-Guinea;* 6 and 12 from Miklucho-Maclay in Gabelentz and Meyer's *Melanesischen und Mikronesischen Sprachen;* 22 from Rev. C. King's Vocabulary; and the remainder from manuscripts of the Rhenish and Anglican missionaries. SIDNEY H. RAY.

South Africa. **Luck.**

Visit to Lewanika. By Reginald Arthur Luck. London: Simpkin, Marshall, 1902. 18 × 13, pp. 86, with three plates. Price 1*s.* net. **131**

In this interesting little book the author has placed on record the adventures, difficulties, and dangers encountered in a journey undertaken in March 1900 from Buluwayo to Lialui, the chief town of Lewanika, the king of Barotseland, for the purpose of buying cattle for the Government. On his journey Mr. Luck had necessarily few opportunities of obtaining anything more than a superficial acquaintance with the natives with whom he came into contact, but their personal appearance, dress, and weapons are described in a manner that gives rise to regret that opportunities for further observations were lacking. The author describes part of a dance he saw in Barotseland "which had never been seen by a white man," but before its termination he was unfortunately discovered and the performance ceased abruptly—a matter for regret, not only for Mr. Luck, but for all interested in native customs. E. N. F.

PROCEEDINGS OF SOCIETIES.

London. **Anthropological Institute.**

Ordinary Meeting, 11th November. Dr. A. C. Haddon, F.R.S., President. **132**

The election was announced of the following as Ordinary Fellows of the Institute:—T. A. Joyce, B.A., N. Annandale, B.A., H. C. Robinson, Major W. Cooke Daniels, W. Sheldon Ridge, M. Longworth Dames, J. Garstang, B A., A. Jennings-Bramly, E. F. Martin, J. Watt, T. Rines, Miss A. Amy Bulley, Miss A. M. B. Meakin.

The Assistant Secretary read a paper by Mr. W. H. Holmes on *The Classification and Arrangement of the Material of an Anthropological Museum.* The paper was discussed by Mr. Dalton and the President.

The President read a paper by the Rev. J. Holmes on *The Initiation Ceremonies of the Natives of the Papuan Gulf.*

The papers will be published in full in *Journ. Anthr. Inst.*, XXXII., 1902.

Ordinary Meeting, 25th November. Dr. A. C. Haddon, F.R.S., President.

The election was announced of the following as ordinary Fellows of the Institute:—A. Harrison, Miss Nina Layard.

Dr. C. S. Myers read a paper on *Recent Anthropometric Investigations among the Native Troops of the Egyptian Army.*

The Hon. John Abercromby read a paper on *The Oldest Bronze Age Ceramic Type in Britain.*

The paper will be published in full in *Journ. Anthr. Inst.*, XXXII., 1902.

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